



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

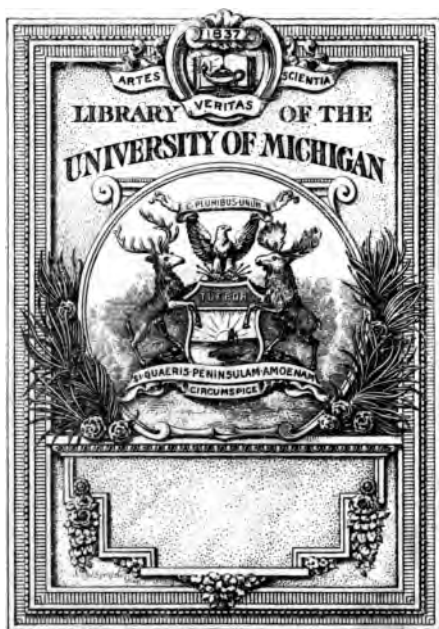
Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

121

DUPL

FINLAND

N. C. FREDERIKSEN



117
321
F5
F85

FINLAND

ITS PUBLIC AND PRIVATE ECONOMY

FINLAND

ITS PUBLIC AND PRIVATE
ECONOMY

119282

Niels Christian
BY
N. C. FREDERIKSEN

FORMERLY PROFESSOR OF POLITICAL ECONOMY AND
FINANCE IN THE UNIVERSITY OF COPENHAGEN

LONDON
EDWARD ARNOLD
Publisher to the India Office
1902

NOTE

For the English edition of this work—which appears simultaneously in French and in Danish—I am indebted in the highest degree to Mr. Edward H. Cooper of London, and Dr. J. N. Reuter of Helsingfors, for their advice and careful co-operation not only in respect of the English language, but also in regard to numerous details of facts, and general clearness and correctness of expression.

N. C. F.

CONTENTS

CHAPTER I

PECULIARITIES OF FINNISH CIVILISATION

	PAGES
Aristotle on Northern agricultural nations—Scandinavian influence on European civilisation—Ancient inhabitants of Finland—Settlement of the Finns—Lapps—Gipsies—Crusades in Finland—Swedish freedom—Difference in language—Importance of the Swedish language—Limitations of old settlements—Settlements in the interior—"Birkarlar"—Small number of parishes—Small population in former times—Famines—Advantages of the climate—Progress in wealth—Comparison with the United States	1-16

CHAPTER II

THE AGRICULTURAL CLASSES

The peasantry in Northern countries—Poverty of Finnish peasants—Great peasant farms in the West and South—In Savolaks and Carelia—"Savu-pirtti"—Origin of these—Buildings in wood and stone—Bath-houses—Area and price of farms—Village communities—Torps and torp-holders—Form of payment by torp-holders—New legislation—"Backstugusittare"—"Inhysingar"—Other agricultural labourers—Classes on the islands—The large farms—Joint-stock companies—Renting of land—Boställen—Ecclesiastic farms—No privileged class	17-33
---	-------

CHAPTER III

THE LAND LAWS OF FINLAND

Free development—Enclosures—Settlements in the forests—Right of settling—Torp-holders under the Crown—"Kronohemman"—Community of possession—Burning of forests by

associations of peasants—Russian donation-estates—Oppression of peasants—Re-union of Viborg with Finland—Full rights of property for the Nobles—Modern example of mediæval development—Purchase of donation-estates by the government—Conditions of re-sale to the tenants—Comparison with Ireland—Land for the landless population—Permission to sub-divide the land—Land bought by town-folk—Loans from public funds—Development of credit—Promise of land by Russian pedlars—New fund for the benefit of the landless—Cottages for working men	34-52
---	-------

CHAPTER IV

METHODS AND CONDITIONS OF AGRICULTURE

Soil—Increase of area—Climate—Barley—Rye—Wheat—Oats—Drying processes—Export of rye for seed—Buckwheat—Hemp—Flax—Turnips—Grasses—Natural grasses—Production of grain—Sowing in burnt-over forests—Burning of grass lands—Rotation of crops—Artificial manure—Agricultural implements—Import-duty on these—Horses—Export of horses—Sheep—Reindeer—Cows—Swine—Duty on maize—Value of domestic animals—Dairy-business—Frozen cream—Great future for dairy-business—Unwise suppression of margarine—Astonishing proposition from Russian quarters—Total of agricultural produce—Wise government assistance—Agricultural associations—Institution for lending money to co-operative associations—Ordinary credit—Development of the Lapmark—Public funds	53-73
--	-------

CHAPTER V

FORESTRY

Extent of the forests—Future of the country—Soil—Location of the forests in the highlands—Pine—Fir—Birch—Alder—Aspen—Other trees—Berries—Waste of wood—Cultivation by burning the woods—Useful burning—Tar manufacture—Saw-mills—Export of other forms of wood—Pulp and paper—Progress of export of wood—Destruction of private forests—The peasants and the woods—Duty on export of wood—Enclosure—Common woods—Control of private owners—Prejudice against commerce—Joint-stock companies as owners—Fire and wind—Damage by cattle—Peculiar situation in the North—Crown forests—Establishing a forest administration—Instruction in forestry—Question of separat-
--

CONTENTS

vii

PAGES

ing lands for agricultural purposes—Mercantile ideas—Purchase of forests—Question of colonisation—Necessary work—Public farms—Value of government forests—Output—Reason of forest destruction—Principles of forest administration—Comparison with other countries—Value of the lumber business to the country 74-110

CHAPTER VI

MINING AND MANUFACTURING INDUSTRIES

General character of mines and manufactures—Granite—Limestone—Brick kilns—China, earthenware, &c.—Glass—Gold—Copper—Iron ore—Pig iron—Smelting and rolling-mills—Nails and other forged products—Doubtful future—Use of steel and pig iron—Engineering works and shipyards—Imports—Protection—Private works—Artisans working in metals—Calcium carbide and chloride of potash—Chemical products of wood—Leather—Soap and candles—Matches—Flour mills—Sugar—Bakeries—Distilleries—Breweries—Tobacco—Printing—Cotton industry—Linen—Woollens—Hosiery and knitted goods—Ready-made clothes—Question of the productive character of the textile industries—Comparison with Russia—Privileges for Tammerfors—Saw-mills—Planing-mills and cabinet-making—Bobbins—Pulp and paper—Factories—Total industrial progress—Artisans—Wages—Women—Children's work—Insurance against accidents—Associations, &c.—Household industry—Personal capacity—Industrial liberty—Water power—Privileges—Question of tariff union with Russia 111-152

CHAPTER VII

COMMERCE, NAVIGATION, AND FISHERIES

Progress of commerce—Composition of the export—Increase in consumption—Trade with Russia—Trade with England—Germany—Denmark—Sweden—Norway—France—Spain—Holland and Belgium—United States—Trade in butter—Commerce and the tariff—Treaty with Spain—Relations with Russia—Present arrangement—Bad consequences of a tariff union—Explanation of the surplus import—Commercial marine—Clearance of ships—Fishing marine—Treatment of fish—Fishery legislation—Artificial fish cultivation—Coast of the Polar Sea and of the White Sea—Finnish migrations to the sea—Utilisation of the Russian coast by Finlanders 153-184

CHAPTER VIII

MONEY AND BANKING

	PAGES
Connection between money and the banking system—Swedish money—Establishment of the Bank of Finland—Silver money, 1840-54—Principles of administration in the Bank of Finland—Final introduction of silver standard—Gold Standard Act—Final organisation of the Bank—Object of the Bank's activity—Character of the private banks—Abolition of private note-issue—Mistake made by the Bank of Finland—Banking law of 1886—Föreningsbanken—Nordiska Aktiebanken—Other banks—Statement of the Bank of Finland—Statements of the private banks—The banks during the period of expansion and restriction—In the sixties—The beginning of the seventies—Last half of the seventies—The eighties—Bad times in the early part of the nineties—Expansion of business—Contraction—Situation of the Treasury—Mortgage Association of Finland—Mortgage bank for the cities—Mortgage departments in the banks—No Stock Exchange—Savings banks—Warehouses for grain—Insurance—Fire insurance—Insurance against accidents—Personal accidents—Life insurance	185-226

CHAPTER IX

MEANS OF COMMUNICATION

Waterways—Rapids—Canals—Importance for the lumber export—Floating—Direct interest of the government—Navigation on the sea—Roads in old times—Recent construction of roads—First construction of railroads—Question of private railways—Construction in rich or poor parts of the country—Cost of building—New lines—Total extent of the railways—Construction of private railways continued—Passenger traffic—Goods traffic—Result of low tariff—Interest on the capital—Increase in gross revenue an argument in favour of government railways—Cheapest capital obtained by the government—Beginning of the post—Modern postal reform—Increase of postal matter—Transfer to Russian Department of posts and telegraphs—Obligation to carry travellers—Russian telegraph—The Finnish railroad telegraph—Telephone	227-246
---	---------

CONTENTS

ix

CHAPTER X

THE EXCHEQUER AND CIVIC DUTIES

	PAGES
Excellent finance—Peculiar character of the budget—Present budget—Ordinary revenue—Income of public property and works—Character of the public expenses—Public debt—Voting of supply—Formation of separate funds—Centralisation of finances—Reform in the accounts—Local funds of general utility—Pension funds—State assets—Public credit in relation to Russia—Church revenues—Town municipalities—Rural Communes—Total of direct taxes—Land tax—Payment in kind—Personal tax—Centonal—Tax of traders in the country and of chemists—Export duty on wood—Former income-tax to the Crown—Income-tax in the towns—Income-tax in rural districts—New propositions to impose income-tax—Stamp duties—Excise of alcohol and beer—Custom duties—Financial possibility of reform—The tariff and the Estates—Russia and the tariff—The old Swedish military organisation—Finland after the union with Russia—Organisation of 1879—Russian attacks on the military organisation—Threatened emigration—Actual organisation—New military laws	247-277

CHAPTER XI

THE GOVERNMENT OF FINLAND AND ITS FUTURE

Character of the government—Central administration—Local organisation—Election of officials—Lutheran clergy—The Greek Orthodox Church—The Communes—Higher schools—Primary schools—The women—Associations—The two languages—The Russian language—The press—Finnish way of thinking—Finnish legal order—Income of the people—Comparison with other countries—Increase in income—Statistics of population—Progress of the industrial and commercial classes—Government and public progress—Montesquien on good government and rich nations—Force of resistance—Bad effects—Attack on the legal order	278-300
INDEX	301-306
GENERAL MAP OF FINLAND	at end
STATISTICAL MAPS OF FINLAND	"

AUTHORITIES CONSULTED

- Atlas de Finlande. Publié par la Société de géographie de Finlande. Helsingfors, 1899.
 Texte de l'Atlas de Finlande. Fennia. Helsingfors, 1899.
 La Finlande au 19me Siècle décrite et illustrée par une réunion d'écrivains et artistes finlandais. Helsingfors, 1900.
 Notices sur la Finlande publiées à l'occasion de l'Exposition à Paris, 1900. Helsingfors, 1900.
 Joseph R. Fisher : Finland and the Tsars, 1809-99. London, 1901.
 K. E. F. Ignatius : Le Grand-Duché de Finlande. Notice statistique. Helsingfors, 1878.
 K. E. F. Ignatius : Finlands Geografi. Helsingfors, 1881-90.
 Gabriel Rein : Statistisk Teckning af Storfurstendömet Finland. Helsingfors, 1853.

Bidrag till Finlands officiella Statistik.

1. Handel och Sjöfart. 17, 18 och 19. Helsingfors, 1897, 1898, 1900.
2. Finlands ekonomiska tillstånd i åren 1891-95. Helsingfors, 1899.
- 7.A. Sparbankerna. 8-9. Sparbanksinspektörens berättelser för år 1898-99. Helsingfors, 1899 och 1900.
17. Forstväsendet, Ny Följd. 5. Forststyrelsens berättelse för år 1897. Helsingfors, 1899.
18. Industristatistik 14. 15. 16. Åren 1897, 1898, 1899. Förre Delen. Bergahandtering och maskinindustri; mynt- och kontrollverket. Senare Delen. Fabriker och handtvärkerier. Helsingfors, 1899-1900.
22. Försäkringsväsendet. 7-8. Försäkringsinspektörens berättelser för åren 1899-1900.

- Statistisk Årsbok för Finland. Utgifven af Statistiska Centralbyrån 16-21 Årgången. Helsingfors, 1895-1900.
 Relation till Finlands år 1900 församlade Ständer om statsverkets tillstånd. Afgifven af Finansexpeditionen i Kejsarliga Senaten för Finland, den 3. Februari 1900.
 Komitébetänkande från komitén för undersökning af de privata skogarna i landet, 1900.
 Komitébetänkande från komitén för afgifvande af utlåtande rörande de principer, på hvilka statens skogshushållning borde grunda sig, 1900.

- Finska Forstföreningens Meddelanden. 15-16. 1899-1900.
 Gösta Grotenfelt : Landtbruket i Finland. En öfversigt. Helsingfors, 1896.
 Gösta Grotenfelt : Det primitiva jordbrukets metoder under den historiska tiden. Helsingfors, 1899.
 J. M'Crombie Brown : Finland and Finland's Forests. Edin. 1889.
 Storfurstendömet Finlands Författnings-Samling.
 Lagberedningens betänkande angående ombildning af den direkta beskattningen. Helsingfors, 1898.
 Edv. Bergh : Vår Styrelse och våra Landtdagar : Återblick på Finlands konstitutionella utveckling under de senaste tjugo åren. 1 b. 1865-67. 2 b. 1867-82.
 Edv. Bergh : Finland under det första årtiondet af Kejsar Alexander III's Regering. Helsingfors, 1893, o. fl.
 A. Boxström : Jemförande befolkningsstatistik med särskildt afseende å förhållandena i Finland. Helsingfors, 1891.
 Ekonomiska Samfundet i Finland. Föredrag och förhandlingar. 1-4. Helsingfors, 1897-99.
 J. V. Tallqvist : Bidrag till belysande af det svenska myntets historia i Finland sedan år 1808. Särtryck ur Vetenskaps societetens bidrag. Helsingfors, 1900.
 J. V. Tallqvist : Blick på Finlands Banks utlåningspolitik sedan år 1868. Särtryck ur Vetenskaps societetens bidrag. Helsingfors, 1900.
 Felix Heikel : Finlands Bank- och Penningväsen, ett bidrag till belysande af den ekonomiska utvecklingen åren 1809-87. Helsingfors, 1888.
 Finlands Statsbudget sammanställd till ett helt och årligt medeltal för Finansperioden, 1901-1904. Enligt uppdrag af Statsutskottet af dess delegerade.
 L. M : Finansfrågor. Helsingfors, 1877.
 The Diet in 1900 : Propositions and Petitions.
 Marquardsen : Handbuch des öffentlichen Rechts der Gegenwart. L. Mechelin : Staatsrecht des Grossfürstenthums Finland. Freiburg im Breisgau. 1889.
 B. Estlander : Bilder ur Donationsböndernas Historia i Östra Finland. Helsingfors, 1899.
 Gustaf Cygnæus : K. Finska Hushållningssällskapet, 1797-1897.
 Axel Liljenstrand : Finlands Jordnaturer och äldre Skatteväsen jämte ett Blad af dess kulturhistoria. Helsingfors, 1879.
 Frithiof Neovius : Handelsförhållandena mellan Finland och Ryssland. Helsingfors, 1890.
 F. von Knorring : Gamla Finland eller Wiborgska guvernementet. Åbo, 1833.
 A. J. Sjögren : Anteckningar om församlingarne i Kemi Lappmark. Helsingfors, 1828.
 Kyösti Järvinen : Landskommunernas i Finland Finance statistik. Statistique Financière de Finlande. Jyväskylä, 1899.

FINLAND

CHAPTER I

PECULIARITIES OF FINNISH CIVILISATION

ACCORDING to Aristotle, the strongest nations and those best fitted for freedom and independence are the agricultural races of the North. The most northerly civilised country in the world, with the exception of parts of Sweden and Norway, is Finland, and three-quarters of its population live by agricultural pursuits. Hungary has a slightly larger rural population, with fewer people in the cities; but no other country has a larger population dependent on agriculture.

At first the tropical countries of the East showed more rapid development; later on civilisation passed to the milder climate of the Mediterranean. The human race was not yet strong enough to overcome the difficulties of a northern climate. When this occurred, it was in Western Europe that the highest form of civilisation was developed. At present the highest stage of all has been reached in England and the United States. Nevertheless, in early times the Scandinavian race played a great part in this development. In the latter part of the ninth century, when the other Teutonic races were becoming to some extent less hardy under the influence of the Christian

religion and of a more or less centralised Roman government, the Scandinavians conquered and occupied more than half of England, the islands and part of the coast of Scotland, and the harbours and adjacent country in Ireland. They founded a remarkable colony in Iceland, whence, later, Greenland and certain coasts of North America ("Vinland the good," as it is called in Icelandic books) were discovered. From Sweden, Scandinavian warriors founded and ruled the states which later developed into the Russian Empire, whence their fleets went down to Constantinople and the Caspian Sea; while at the same time other fleets were descending on the Spanish peninsula, Morocco, and other Mediterranean countries. Indeed the Scandinavian race, always strong in its freedom, became almost irresistible when it had learnt the arts of more modern warfare from the nations with whom it came into contact. Their most remarkable contribution to mediæval civilisation was Normandy, the colony which they finally formed, after much devastation, and some other more short-lived settlements, on the coast of France. The Franco-Norman descendants of these colonists not only conquered England, crossed over to Ireland, and organised Scotland, but also, after founding highly-civilised kingdoms in Southern Italy and Sicily, and thence making further conquests in the Balkan peninsula, in Africa, and even in Asia Minor, were the leaders in the greatest and most wonderful movement of mediæval times, the Crusades.

About a hundred years before the first Scandinavians spread westwards, the Finns had moved into what is now known as Finland. They came from the heart of Russia, where they had been settled north of the central Volga. There were two tribes, differing in

physical appearance and mental qualities; one, the slightly darker and more vivacious Carelians of Eastern Finland and of the adjoining parts of Russia as far north as the Gulf of Bothnia; the other the lighter-haired and square-set Tavasts of the west. Living in the south-west corner of Finland were the Finns proper (*egentliga Finnar*), who were closely connected with the Tavasts. More or less related to these tribes were some other Ural-Altaic tribes, who remained in the interior of Russia, and also some tribes who advanced simultaneously with these others towards the Baltic—the Coures and Lives (who were related to the Carelians), and the Esthonians (who were related to the Tavasts and Finns proper). It has been suggested that the Kajans (*Kainulaiset* in Finnish, *Kvæns* in Norwegian; they are described by Othere, the Norwegian skipper sent northwards to explore by Alfred the Great) were another Finnish tribe living in the country, according to the commonly accepted view, before the coming of the Carelians and Tavasts. The name of these Kvæns, which resembles the Swedish “*kvinna*,” the Danish-Norwegian “*kvinde*” or “*kvind*,” and the English “queen,” has given rise to numerous myths about a northern nation consisting of Amazons, or at least always governed by a woman. We certainly find this tale several hundreds of years earlier in Tacitus. These Kvæns are now generally supposed to be identical with the Biarmians (the modern “*Permiens*”), familiar in the old sagas, and either Carelians, or related to the Carelians.

Long before these migrations took place, it is certain that southern Finland was inhabited. On the coast, and on the navigable rivers, and on that part of the Bothnian coast which is now inhabited by Swedes, we find numerous antiquities of the same kind as are

found in western Europe, especially in Scandinavian countries. Many belong to the Later Stone Age, a few belong to the Bronze Age, and a large number to the successive Iron Ages. The most eminent antiquarian authorities have now to some extent modified their old theory of successive immigrations, in which an entire people, using stone implements, was replaced by a population using bronze; or they believe at least that for some thousands of years before Christ a Teutonic race inhabited parts of Germany and the greater part of Scandinavia. It is probable that antiquities, found chiefly in south-western Finland and on the chain of islands which connect Finland with Sweden, really belong to an old Scandinavian race. The Swedish authors Montelius and Wiklund believe that such a race actually lived here two thousand years before Christ. Stone implements, belonging to the Laplanders, some of them of a very recent period, have been found in the interior of Finland; but these differ in character from those found in the coast districts. Again, on the coast east of the river Kymmene, the Stone Age, which lasted much longer in that region, is supposed to indicate a Finnish race. Moreover, while a large number of words of Teutonic origin, found in varying numbers in the different Western-Finnish languages, are to some extent borrowed from the Goths (so that it is obvious that somewhere the Finns have been in close relation with the Goths), yet the greater part have been adopted into the Finnish language from the Scandinavian, before the latter was divided into separate languages. Montelius and Wiklund think it possible, and even probable, that such a contact between the Scandinavians and the Finnish tribes took place in southern Finland. It must be admitted, however, that the truth about these prehistoric populations is not

quite clear. We can only guess that part of the present Scandinavian population of Finland is descended from Scandinavians who were there some thousand years before the Finns arrived. What is certain is that some Finnish tribes were here about A.D. 700.

While the Tavasts and Carelians did not differ greatly at first, and soon amalgamated in certain parts of the country, the Lapps or Laplanders remained an entirely separate race. Their language resembles Finnish, as it does other Ural-Altaic languages; but they themselves are totally different in physical appearance, mental development, and manner of life. They seem to have got their language from their more civilised neighbours. They are Arctic nomads; while the Finns, even when they first came into the country, had domestic animals and some knowledge of agriculture, as may be seen in their old national epics, the *Kalevala*. The Lapps came early into the country, and at a later period were to be found in the interior; but they invariably retired northwards when the Finns advanced, and rarely amalgamated with them in any way. In modern times the Lapps are more settled—though exclusively in the north—and often take service with the Finns, so that more admixture takes place; but the total Lapp population in Finland is only about one thousand, and most of the reindeer (formerly almost exclusively the property of the Laplanders) belong now to the Finns. Only a small number of Lapps continue to move about with these animals, which are admirably adapted to this northern climate. The Gipsies of Finland are more numerous than the Lapps, but less amenable to control; they came from Sweden in the sixteenth century, and now number nearly two thousand. In modern Sweden they hardly exist,

and their wanderings in the remote eastern districts of Finland testify to the backwardness and superstition prevailing in that part of the country.

It was the last period of the Crusades which introduced Swedish culture into Finland. In 1006, Olaf Haraldson—St. Olaf, later on a king and popular saint of Norway—was in southern Finland; and St. Olaf's Saga speaks of old Swedish kings who had power in Finland and Carelia ("Kyrialand"). The "law-man" Thorgny tells Oluf Skótkonung that the men of Sweden would gladly accompany him to the East, if he would follow the example of his ancestors and go there instead of harrying the Norwegians. Oluf's daughter Ingegjerd is finally married to Jaroslav of Russia, and obtains as a dowry Ingermanland, which is governed in her name by her foster-father, Jarl Ragnvald of Westgötland, the friend of the Norwegians. The stories about the crusade of King Erik the Saint, Jedvardson, Jarl Guttorm (the same name as that of the Danish King Godorm or Gudrum in England), and of Bishop Henrik (an Englishman by birth) to Finland proper, and particularly to the district of Åbo, may be for the most part only a legend. There is a story that, after the visit of the Papal legate, Nicholas of Albano, to Sweden, Henrik went over to Finland, where he was killed the following year (1158), and that after him Bishop Rodulf was taken prisoner and killed by the Carelians in 1178. At all events, Birger Jarl went a hundred years later into Tavastland, where he built the castle of Tavastehus. A little later, in 1293, the Marsk (or Marshal) of Sweden, Torgils Knutson, sailed round to Carelia, whose people had already established communication with Novgorod; and there he built the castle of Viborg, where it is said that fourteen Carelian

"gislalag" or village-communities submitted to him. This is supposed to indicate that the Finns had some political organisation, though not precisely the "härads" or "hundreds" of the Scandinavians. Already, before this, the English-born Bishop Thomas had been in the country, and is said to have proposed the formation of Finland into a separate principality under the Pope, in the same manner as some other ecclesiastical states further down the eastern coast of the Baltic. Thomas is said to have built the cathedral of Åbo, but to have given up his see in 1245. His successors Bero or Biörn, Ragvald or Ragnvald, and Catillus or Ketil, bear names which are familiar in the Danish-Norwegian conquest of Northern England and Ireland, as well as among the Norman chiefs in northern and central France. During the same period the Danish kings carried a crusade into Esthonia, on the other side of the Gulf of Finland, and conquered the Finnish tribes who were settled there.

The conversion of the Finns, like all other conversions in those days, was chiefly effected by the sword; but there was one great difference between this conquest and those made by the Crusaders in the East, or in north-eastern Germany, or in the Baltic provinces of Russia. This difference lay in the fact that the Swedes were a nation composed of freemen only; like the Danes in northern England three centuries earlier, they were all free cultivators of the soil, and the freedom of the peasants or agricultural population was from the first the basis of the social system in Finland, as it was in all Scandinavian countries. On the other hand, the social ideas of the Normans from Normandy and southern Italy had been largely influenced by France and by other countries dominated by the Roman law and by mixed Roman and Teutonic insti-

tutions; therefore the Normans took possession of new territories as feudal lords.

Another peculiarity of the conversion of Finland was due to the differences in language. It has been said that the Swedes ought to have amalgamated with the Finns, as the Normans after coming to England amalgamated with the English and Danes. There was, however, this great difference; that the Swedes were not (like the Normans and the Danes in England) a nationality closely connected in race and language with the people whose country they had conquered; they can better be compared with Norwegians and Danes or, later on, Normans and English in their relation to the Celtic population of Ireland, or with Frenchmen in Alsace or Belgium. So great was the difference that there was no possibility of a language common to all, as in England. Not only did the upper class generally speak two languages, but an entirely distinct Swedish population was settled on the coast of the Gulf of Finland in Southern Nyland, from the Kymmene River westwards, and in Finland proper as far as where the mountain-chain separates the southern coast from the west, and on the groups of islands known as the "skärgård." On the other hand, the western coast of Finland proper has a population chiefly Finnish; while again on the lower and more fertile coasts of Southern Ostrobothnia, as far north as Gamla-Karleby, there is a large Swedish population. The total number of Swedish inhabitants of Finland amounts to nearly one-seventh of the whole population. The Swedes on the southern coast may, like those on the other side of the Gulf of Finland—on the islands of Dagö and Runö, for instance—have come there much earlier than the dates mentioned above; and according to the last researches, even

before 400 B.C., at which date the Swedes were, until recently, supposed to have come over to Svealand. Scandinavian merchant-warriors may even have had dealings with the Finns a long time before the Finns came into Finland, a supposition borne out by the number of words relating to domestic economy which the Finns have borrowed from the original Scandinavian language. Some of the Swedes in Ostrobothnia evidently came later from different parts of Sweden; finally there was a considerable amount of change and re-settlement on account of war, pestilence, and famine. The preservation of the Swedish tongue among the upper classes (who, however, also speak Finnish) has certain disadvantages; but it has this enormous advantage, that the Finnish nation, unlike all other Ural-Altaic people except the Hungarians, has thereby participated in western culture. Not only did the Finns share in Swedish freedom, but together with the Swedes they adopted the religious reformation of the sixteenth century, receiving the education of the reformed church, whose schooling has brought about a better understanding of personal responsibility, individual rights, justice, and humanity. It cannot be denied that the nations which did not accept this change, but remained part of the Roman Catholic Church, or of the Greek Orthodox Church with its dead Byzantine forms, have lagged behind in this respect. The upper classes in Finland, like the relatively cosmopolitan Swedes, were also greatly influenced by the period of free-thought and the zeal for national reform and development which marked the close of the eighteenth century.

The crusades, which brought the Finns into the circle of civilised nations, came late. Putting aside the Kvæns in Northern Ostrobothnia, the first Finns,

Tavasts as well as Carelians, had only occupied the southern coast, including Southern Tavastland, and, generally speaking, the valleys of the great rivers, the Vuoksi (which flows into the Ladoga Lake), the Kymmene (which flows into the Gulf of Finland), and the Kumo (which flows into the Gulf of Bothnia). We find evidence that there were formerly more farms and villages in these districts than at present. Up to a relatively late date there were no settlements beyond the region of the great inland lakes which are found in the southern part of the country. They had extended no farther than Savolaks, the district comprising the islands in the enormous Lake of Saima and other neighbouring lakes, the islands on the Bothnian coast as far as Western Satakunta (a name which means "the hundred townships") and those on the coast north of this country. The Swedes had settled here after the crusades, and the mediæval "*Stora Rim Chronikan*" (Great Rhymed Chronicle), speaking of the Crusades of Birger Jarl, in 1249, says: "They put into the country Christian men; where I expect they still remain." In these parts we meet the same geographical names as in Sweden, Denmark, and Danish England, such as Ulfsby, Carleby, and others. On the other hand, Northern Tavastland, Eastern Satakunta, and the interior of Ostrobothnia, were colonised at a much later date. In Northern Carelia the scanty population was more closely connected with the Russian principality of Novgorod. In the year 1500 there was only one Greek church built in these parts; at that time, and far into the sixteenth century, paganism still existed. For some time there was raiding and fighting between the Tavasts and Carelians, and these latter suffered also from the Russians, who were then under the suzerainty of the Mongolian

Khans. In the middle of the fourteenth century, King Magnus Erikson began serious negotiations with the Pope and his legate with regard to a general crusade against the Russians. In 1475, at the time of the Scandinavian Union, the great Danish-Swedish chief, Erik Axelson Thott, built the castle of Olofsborg (now the centre of the town of Nyslott) on a little island in Savolaks; and in 1605 the country still farther north was made secure by the building of the castle of Kajaneborg, also situated on an islet in the middle of some rapids near the great Uleå Lake. It was characteristic of these days, as late as into the fifteenth century, that the kings had left the whole government of the northern part of Sweden and Finland in the hands of guilds of traders ("Birkarlar," possibly derived from the word "by," meaning "town"), who lived in towns on the coast. The old kings not only left in their hands all trade with the Lapps, then wandering far southwards, but also permitted Lapps to be distributed among the different guilds of Birkarlar who had a right to tax them; the Birkarlar themselves, on their part, paying to the Crown a moderate tax, consisting of a few skins. At the time of the Reformation there were in all Finland only 141 parishes, and only a very few in the immense north-eastern part of the country. At present there are 366; the parishes of Finland being much larger in extent and population than those in other Scandinavian countries.

A glance at the figures of the population show how tardy was the colonisation of the country. Even at the beginning of this century it was only the southernmost coast and the coast of the Gulf of Bothnia which were well populated. A coloured map, showing the density of the population, would be relatively dark just

there, and very lightly shaded everywhere else. After the present Russian frontier-line had been definitely settled by Gustavus Adolphus at the peace of Stolbova in 1617 (it was drawn across the watershed in the deserted eastern forests), war continued to decimate the population, first because they sent contingents to the victorious armies of Sweden, and later when they were defeated and their country devastated by Russia. After the "Great War" with Peter the Great, which was concluded in 1721, the population had been reduced by one-half and now numbered only between 200,000 and 250,000. In the middle of the century, at the end of the "Little War" with Russia, it was not much more than 400,000; or, including the part of Finland then ceded to Russia as a result of the war, at all events under 500,000; which is one-fifth of the present population. After these wars, thousands of villages were deserted; sometimes, as in 1721, only old men, women, and children being left. After such periods, it is true, marriages and births increased considerably. In 1790, at the conclusion of another war, the country had a population not exceeding 800,000, or a third of its present number.

It was not war only which reduced the population. The country suffered periodically from famine and its consequent diseases, as well as from the Great Plague common to other parts of Europe. In 1509, there was an appalling famine, another extending over two years occurred in the middle of the seventeenth century, and others towards the end of the seventeenth century, in 1693 and in 1695-7. In three years a third of the population died. In 1710 the plague destroyed whole villages. In 1723, 1726, 1727, and 1731, after the Great War, there were again terrible famines. During the twelve months between September 1796 and

1797, more than 100,000 people died. Severe frosts and consequent destruction of the crops occurred in 1856, 1862, and 1867, when the population in one year decreased by 100,000 souls. It is especially during the month of August that frost destroys the growing crops. When the hoar-frost melts away on sunny mornings, corn and vegetables are killed in large quantities. Now, however, not only are these frosts less frequent—owing to the bogs and marshes, where the frost-fogs linger, having been drained—but with the extension of railway and other communication it is easier to bring relief in the famine-periods. The people themselves have other provision for famine years. Such occupations as tree-felling and forest-work generally bring a certain amount of income, especially in the northern districts, so that the precarious profits of agriculture are of less vital importance. Finally, the great development of dairy-farming makes the people less dependent on the cultivation of grain.

Notwithstanding the frequent frosts, the climate of Finland cannot be called unfavourable to agriculture. This is due to the Gulf Stream, which mitigates the rigour of the climate, though not to the same extent as on the Norwegian coast. Finland is also surrounded by the Gulf of Bothnia, the Gulf of Finland, and the Lake of Ladoga, three great reservoirs which retain the warmth of summer far on into the autumn. The whole country slopes to the south-west, which leaves it exposed mainly to the warmer winds. There is, of course, a great difference in the climate in different parts of the country. "When it is time for strawberries to be in flower in Tammerfors, the Lapps are driving in sledges." At Helsingfors the longest day and the longest night are not more than 18½ hours, which

is not very different from the rest of Europe. At Uleåborg they are 22 hours, and in the northern part of the Lapmark they are two or three months. In the far north the concentrated light and heat of the long days enable barley to mature in from six weeks' to two months' time.

Now when peace has reigned for a long period; when the country has had a relatively good and for the last generation even an excellent government; when science and intelligence have begun to surmount the difficulties of nature; the progress and the increase of production and wealth in Finland are really wonderful. The average crops are double what they were a generation ago. The export of butter has increased to 30 million (Finnish) marks, and of wood to 100 millions; and statistics show an export of 18 million marks' worth of cellulose and pulp for paper. Wages are still very low in some parts of the country, but in other parts they have more than doubled, and are sometimes as high as in America. The number of paupers in receipt of relief has decreased in eight years from 110,000 to 68,000, partly owing to reformed poor-law administration, but largely owing to economic progress. According to the figures of the income-tax in towns, small incomes have increased faster than large ones, and the people live in much greater comfort than formerly. Bread mixed with pine-bark and chopped straw, which was once an ordinary article of food in bad years and was generally eaten in some parts of the country, is now no longer common. The ordinary fare of the peasants is still very poor, consisting of rye-bread baked twice a year, sour whey, sour milk, and salt fish; the result of which diet is catarrh of the stomach, whose most familiar symptom is the sallow complexion so often visible in the country. But in

this respect, too, there is great improvement. Commerce in general is showing a most remarkable rate of progress. In a few years the import and exports have doubled. In the matter of foreign trade, Finland now ranks high among the countries, regard being had to its relative population. Some of the export statistics have been mentioned; among items of import, grain, meat and pork, sugar, coffee, and petroleum show a considerable increase, testifying to the larger consumption and more luxurious living of the people. Besides these articles, metals, coal, and other materials used in manufacturing and agricultural industry are more largely imported. Within twenty years the deposits in savings banks have quintupled, the capital of the commercial banks has trebled, and the deposits in the latter have been multiplied by ten. All these statistics, as well as other facts about which we shall speak later, point to the same conclusion.

Finland cannot be compared with America. It is still a poor country and backward in many respects. Also its progress is not quite on American lines. Still it reminds us in many ways of the great country which is progressing more rapidly than any other of modern times. Scandinavian emigrants of the peasant class very seldom return to their country with the intention of remaining there; or if they do, they nearly always change their mind and go back to the United States. With the Finlanders it is different, perhaps partly on account of the difference in their language, which makes it less easy for them to amalgamate with the Americans. In the case of Scandinavians it must be remembered that half the language of America is nearly the same as their own. We are told, however, that the case is the same with the Swedes from Finland; and the reason for the more frequent return

of the latter to their native country may very well be that in Finland there are the same opportunities for improvement, cheap land, etc., as in the United States. Even the poverty in Finland reminds us of what has been said about Western America: "it is not poverty but incipient wealth." At all events we find in Finland an admirable capacity for improvement. The question still remains whether this will be hampered by unnecessary difficulties coming from political sources.

CHAPTER II

THE AGRICULTURAL CLASSES

IN all northern countries the "bönder," or peasant-proprietors, form the most important class. They are inferior in most respects to the tenant-farmers of England and to the landowners of the United States; but they are superior to the small peasants of Southern and Eastern countries. This is partly due to the fact that in the North, as well as in the mountainous districts of Central Europe, it is impossible to make a living by agriculture on a very small scale, whereas with the grapes and fruit-trees of the sunny South it requires little labour to make money out of a very small piece of land. This superiority is, however, also largely due to the social history and the peculiar development of the people, which accounts, too, for the fact that in North-Western Europe we have this middle-class of peasant-proprietors. In Russia, on the contrary, we find only the "moujik"; while in Germany, east of the Elbe, as well as throughout the Russian Baltic provinces, where the Germans have conquered Slav lands, we find large estates, generally occupying from a third to half of the land of the district; and in some parts of the country (in Mecklenburg, on the island of Rügen, and in parts of Pomerania and North-Eastern Holstein) occupying nearly the whole. Without doubt this middle-class is a great source of strength; it has, for instance, enabled northern nations to colonise in a manner entirely

different from that of Portugal or Spain. It is a misfortune when any class is too self-contained, too immobile; and the recent progress of the peasantry is due to its diffusion as a class. But its existence in modern Finland is a great advantage compared to the social state of most other countries. To some extent it is developed from the old village community with its communal cultivation of land; the "bönder" shared in this common cultivation, while the large farms of the gentry and the small plots of the cottiers were outside the common lands, the former being too important, the latter too insignificant to form part of them. But this middle-class does not owe its existence solely to this ancient method of holding and cultivating land. A powerful peasant class exists in those smaller districts of the North which were divided into isolated farms without villages or common cultivation and property; and, on the other hand, it does not exist in countries where the old communal cultivation of the land was the rule, but where, before the systematic enclosure and distribution of mixed farm lands, the possibilities of cultivation favoured the division of land into very small plots. The condition of the peasantry is mainly determined by the character of their agricultural labour, which is again dependent on natural conditions. In reality, the largest peasant farmers came into existence precisely owing to this absence of village communal proprietorship; either because the old settlement took place on already existing farms (as Meitzen supposes to have been the case in Germany west of the Weser, and in the adjacent parts of Belgium and France, where Teutons, according to him, entered and settled down in old Celtic farms), or the first colonisation dates from a time when the system of common land was falling into disuse, and

the poverty of the land led to the occupation of entirely isolated farms. This has occurred in large districts of Scandinavia and Finland, at some distance from the coast or on the hilly watersheds between the rivers, where the bönder were obliged to settle down each man by himself, a situation which has contributed largely to their strong and independent character.

Certainly there is a great deal of poverty in Finland. This is the case especially in remote districts far away from civilisation, where the forests are as yet untouched and valueless. It is also the case in the eastern parts, including the south-east, where the peasants have been unluckily bound to the large domains given away by Russian rulers when these lands were taken from Sweden at a period before modern reforms had begun to take effect. The manner in which some of these peasants live, in miserable houses, with a pig in the same room as the family, is sometimes compared to the style of living of the Russian peasants. But even in this part of Finland the peasants cannot be compared to the Russian "moujiks"; nowhere in Finland is there anything like the class of poverty-stricken moujiks which we find in large parts of the interior of Russia. The Finns always live much better, demand much more from life, and have not the habits of the miserable Russian peasants, who spend most of the winter asleep on their great ovens, so that they may still further reduce their already small consumption of food. Nor do we find in this eastern part of Finland an unusual number of paupers in receipt of relief, a fact which is partly due to the facilities for earning money afforded by the neighbourhood of St. Petersburg. A relatively large amount of pauperism is found in the remote country districts, where the peasant proprietors themselves in bad years live on

bread made from bark and chopped straw, and where the few sheep they slaughter are rarely eaten by themselves, or at most only supply a small quantity of salted meat. In these remote districts, even in the first part of the nineteenth century, many large parishes had no communication with the outer world except by riding-tracks.

Generally speaking, it is in the west and south that we find large peasant farms such as are found in all Scandinavian countries. The dwelling-houses, usually painted red with white window-casings, give an impression of prosperity. The house has a considerable number of rooms, with fine tiled stoves and good furniture, the walls being covered with books and paintings of popular leaders, of the recent great deputation to St. Petersburg, or sometimes of members of the Imperial family who have been regarded as friends of the Finnish people. The peasant proprietor of such a house would have four or five horses, twenty or thirty cows, good farming implements, possibly of English or American manufacture, and sometimes even a small steam-engine. The houses are built round a quadrangle in the same style as in Denmark, or like the old houses of the Franks. In the west, in Ostrobothnia, where the farmers are generally well-to-do, the houses usually have two storeys. Farther in the interior, in Tavastland for instance, the farmhouses are often grouped together into villages, especially those on the shores of rivers and lakes; the farm-lands, however, lying scattered some distance away. The houses are not built round a quadrangle, but spread over a larger space, and often stand in long rows. Here, as in other parts of the country, there is frequently a separate house attached to each farm for the use of the pastor or other visitors.

As a rule, the farmers are less wealthy in the interior, but even there they are well off. In Savolaks, a country of islands and peninsulas and innumerable large lakes, the peasants generally choose for their house a fine situation near the water, with a view over the lake or river. Here they find some fishing, and in the neighbourhood of these lakes their corn is less likely to be damaged by frost. Occasionally too, in these parts, the farmhouse is built on a hill, because the frost is less severe than in low foggy places, and the land, although covered with boulders and small stones, is easier to cultivate than the richer lands in the valleys, which are generally wet, and, even when they are drained, have often a substratum of large flat stones. Here, too, the houses are often unpainted, as in the poorer parts of Sweden and Norway. The acreage under cultivation is small, but the pastures on the site of the burnt-down forests are relatively rich. The peasants here have always been good butter-makers, the butter having a fine flavour due to the aromatic herbs in the pasture lands. They have fish, too, and mutton, and in parts of Carelia there is better bread than is to be found in the rest of Finland—bread baked once or twice a week, and not as elsewhere a few times a year only. Here in Carelia many of the farms are “krononatur”; that is, the farmers are hereditary tenants of the Crown with a right of sale. We shall refer to this again later.

In the eastern part of the country we still find a certain number of “savu-pirtti” or “smoke-cottages,” a few of which are also found in the north and in other parts of the country. Formerly they were quite common, now they number less than 12,000. We hear of the same kind of house in old Scandinavia, in Ireland, and elsewhere. It has an open fireplace,

and the smoke is let out by openings in the roof, or in the wall just below the roof. There are no windows, and the smoke usually forms a dense cloud in the upper part of the room, the air below being warm and clear. But the wind drives the smoke downwards, and eye diseases are frequent where this kind of house exists. When the peasant himself lives in a smoke-cottage, he has generally another building for the reception of strangers.

The origin of the word "savu-pirtti" is not without interest. The word "kota" or "cuda" (a hut), which is seen in the English word "cottage," is common in the Finnish language; and round huts are still in use among certain Finnish tribes in the east. The word "pirtti," which occurs in "savu (smoke) pirtti," is supposed to come from the Lithuanians and Letts, among whom it means "bath-house." Like the Finns to-day, and unlike the Russians, these people made free use of the bath. The pirtti was used among them as a bath-house, as well as a drying-house for grain-sheaves; and some of the Esthonians still use it for both purposes. According to this origin of the word, this form of building is supposed to have been learnt in very old days from the Lithuanians and Letts, just as, later, the Finns learned most of their domestic economy from the Scandinavians.

The abundance of wood is a great feature in the domestic economy of the Finnish peasant. The forest frequently provides a considerable part of his income, in some districts the largest part. As in other forest countries, he uses wood for everything, often with great extravagance. He burns an enormous quantity, and spends much labour in carting and chopping it. The houses are built of wood, chiefly of solid timber, and not of boards, as in Sweden and Norway. Some

of the outhouses are built of granite, often of large hewn stones; while the outhouses of the peasants are often only built of round stones piled together. It is curious that during a fire the most solid granite walls crack under the influence of the water from the fire-engines.

Every Finnish family has its *sauna*, or bath-house. It is the first place built, and the family live in it until the rest of the house is ready. In this bath-house is an oven filled with stones, and steam is created by throwing water on these stones. The bathers lie on large berths under the roof, and improve the effect of the bath by whipping themselves with birch-twigs. Every one takes a bath on Saturday night; and during harvest-time, hay-making, and forest-burning they take one every night. It is commonly said that Englishmen and Hollanders are the only clean nations. The people of Finland are cleaner than the people of England or Holland.

It is difficult to estimate the average size and average value of these peasant farms. Generally a peasant has (including forest and pasture land) at least 100, 250, or 400 acres. In the more highly-cultivated districts we might say that the area of land capable of cultivation on a Finnish peasant farm of average size is the same as that of a farm in the United States, or as that of the German and Scandinavian farms before they were subdivided—namely, 120 acres. Even in the most fertile provinces, such as Nyland, Åbo-Björneborg, and Vasa, the total area is not less than 400 to 450 acres, because so much uncultivated land is found everywhere. In the province of Viborg the average size is only 245 acres, not because this province is richer but because the peasants have been impoverished by the

large domains given away by Russia in the last century. In the northern forest country the farms are much larger; in certain parishes they are regularly of 3250 to 5000 acres; and in the Lappmark some farms are said to cover an area of 600,000 acres. In the not entirely satisfactory statistics published by the government, the farms are divided into four classes, according to their size. There are altogether about 118,000 farms, of which 32,000 contain less than 5 hectares ($12\frac{1}{2}$ acres) of cultivated land, 61,000 contain from 5 to 25 hectares ($62\frac{1}{2}$ acres), 22,000 contain from 25 to 100 hectares (250 acres), and 2700 contain more than 100 hectares. These four divisions represent proportions of 28 per cent., 51 per cent., 19 per cent., and 2 per cent. of the total number of freehold farms. Besides these, there are 72,000 small holdings, forming part of other properties. It is scarcely possible to calculate the average price of land, because the proportion of pasture and forest land causes the value to vary considerably. A comparatively large farm can be bought for 15,000 to 20,000 marks (£600 to £800), a smaller one for 4000 to 5000 marks (£160 to £200)—prices which seem sometimes to represent barely the value of the buildings and fixtures. Unlike most agricultural countries, however, land in Finland during the last few years has increased in value by at least 25 per cent.

Village communities in Finland have been no less common than in other Scandinavian and Teutonic countries, including the eastern part of England, with the exception of Kent. On ancient maps, before it was decided, according to laws dating from the middle of the eighteenth century, to enclose the common lands, we may study the settled parts of the country (Ostrobothnia and the south-west, and even in the

east, where the country was settled, as, for instance, on Lake Ladoga and the River Vuoksi), and see everywhere common fields with numerous small plots, each the property of some small holder. The learned Professor Meitzen of Berlin, who has gone more deeply than any one into this matter, continuing the studies of the Danish Professor Olufsen at the beginning of the century, is inclined to attribute this partition to the date of the settlement, when, in the period between Cæsar and Tacitus, the people abandoned their nomadic life for agriculture. The Danish author Lauridsen considers that it was mediæval law and custom which produced this method of holding common lands. Certainly in Finland it was due to Swedish custom and mediæval legislation. The Finnish tribes living in Northern Russia seem to have inhabited large isolated dwellings, and did not live in villages, or, still less, hold lands in common. With the division of the family the land, too, has been subdivided, thus giving rise to the idea of private property. The "Mir," or Russian communal village, was created by order of the government, who proclaimed all land in this part of the Empire to be crown land; and by a decree of 1829 this proclamation has finally been enforced. It was probably the Swedes who introduced ordinary European methods of agriculture into Finland. To the advantage of agriculture irregularly mixed plots were abandoned, and the law directed that village lands should be divided into long, regular, parallel plots by the system known as "sol-skifte," or sun distribution. There are decisions about enforcing this system in the Finnish laws as early as the fourteenth century, where it is called "right Swedish distribution." It seems to have been an advance on the primitive agricultural method of an earlier period;

just as later on it was a great advance when this system of partition was superseded by distribution into single farms, with the buildings of certain farms placed outside the village.

The word *torp* (the English "thorpe") has different meanings in different countries. In Germany *dorf* means the common village. In Denmark the word *torp* and its numerous derivatives signify always an outlying hamlet, an offshoot from the *by*, which means the original settlement. In the case of a single farm the word is only used where a large farm has absorbed the whole of such an outlying hamlet. In Sweden and Finland *torp* and *torpare* are used to describe a small holding of land and its inhabitant; and in Finland it is further used about such a holding when it is not owned by the actual tenant, but forms part of a possession belonging to another man. There are about 72,000 of these, and many are of some considerable size, containing from 12 to 25 acres of cultivated land; so that the tenant, by the help of additional pasture land, can often keep one or two horses and four to seven cows, or even more. Such holdings might elsewhere be called farms; and the difference between the large "torp"-holders and the peasant tenants or land-bönder of Finland (of whom in 1893 hardly 6000 were left, and barely 1000 on the estates of the nobles) is merely that the land-bönder rent the whole farm, which is the unit for purposes of taxation. Nevertheless the *torp*-holder often has a good house and fair furniture, though his condition, like that of the bönder, differs in different parts of the country.

In Finland, as in Sweden, rent for these *torps* is usually paid in labour. This is chiefly the result of custom, and might now often with advantage be dis-

continued. In other cases, however, the great distances, and the primitive economic conditions of the country, make it desirable for both parties to agree that the rent shall be so paid. The tenant cannot sell his spare labour to others, and the landlord cannot easily obtain labour elsewhere. The torp-holder or cottier usually binds himself also to work for his landlord, occasionally also to act as a carrier during his spare hours, receiving payment for any work beyond what is sufficient to pay his rent. In the case of small torps held, for instance, by artisans who have other kinds of work, the tenants are sometimes only obliged to give their labour for a few days in harvest-time or hay-making time, when labour is of exceptional value to the large farmer. Sometimes the torp-holder has built his own house—a fact which is, of course, considered in the rent. In the eastern part of the country, in Carelia, and also in the north, where the landlord has less need of labour, the cottier sometimes pays his rent in kind, paying one-third of the net crop of grain, or even one-half if the owner has provided the seed. For waste land just reclaimed, nothing is paid for the first three years. For the right to grow crops on the “svedje” or burnt forests, a right which is to be used for a few years only, the tenant pays from one-quarter to one-third of the harvest. One reason for paying rent in kind is the lack of a regular market for grain, and the variation in the harvests, caused especially by the frosts. Occasionally the cottier lives too far from his landlord to work for him. Sometimes he has the right of hay-making, paying one day’s labour per week for each load of hay.

The Legislature has so far interfered (or proposed to interfere) only with the following points in the position of torp-holders and land-bönder: (1) Contracts must

be in writing and witnessed; otherwise they will be regarded as binding for ten years. (2) A valuation must be made when the tenant takes or gives up possession. (3) All dues, especially labour, must be specified and fixed, though rent in kind may be paid either in a fixed quantity or as a certain proportion of the harvest. (4) Improvements must be paid for according to valuation, making allowance for reasonable profit accruing from them; improvements on a large scale may not, however, be made without permission of the owner. Hereditary tenancies continuing for more than two generations are not encouraged by modern legislation.

Besides the torp-holders there is a class not mentioned in the official statistics. These are the smaller cottagers, the "backstugusittare," who, together with kindred classes, number, according to a careful private calculation, about 100,000. Most of these cottagers have also a small patch of land, usually pasturage for one or more cows. In many countries the labourers would be happy if, like these Finnish cottagers, they had cows which gave sufficient milk for the family. Many of these cottagers are very poor; others are better off. Some aim at becoming torp-holders by reclaiming waste land. Many workmen have not even a cottage, but live in rooms in other people's houses.

The situation of this large class, which has no home of its own, is often a very unfortunate one. In former times these "inhysingar" and their families were often in a most curious and precarious position. The Pauper-Law required that some householder should be responsible for them, and that they should not move out of their own parish unless they could get some one to give security for them. This hindered their freedom of movement, as did the old Poor-Law in England. The

peasant farmer with whom they lived could only employ them for a small part of the year, and they passed the long winter sleeping by the fire or elsewhere. Even to-day, people of this class seldom have beds. In those days even their clothes did not always belong to them. In modern times they are better off, because there is more work to do, but the winters are still a great difficulty.

In addition to their tenants who pay rent in labour, many of the bönder employ ordinary hired labourers, chiefly to drive their teams of horses. Some of these (the "drängar") have their meals on the farm, others (the "statkarlar") are paid in kind and are also provided with pasture for a cow. Even more elaborate arrangements are made with the "spanmåls-karlar" ("grain-workers"), who, besides being paid in grain, receive a piece of land for their own use, and are, therefore, granted certain days on which to work for themselves. A farm-hand, in the wealthier districts, can now earn from six to seven hundred marks a year, a temporary labourer $2\frac{1}{2}$ marks a day in summer, or 1.75 marks in winter; a woman, 1.30 marks in summer and 1 in winter; and a man with a cart and horse, 4.60 marks in summer and 3.20 in winter.

On Åland and the numberless other islands situated in the south-west and on the southern coast, as well as on parts of the Bothnian coast, we find the same three classes as on the mainland: the middle-class, the cottagers with land sufficient for cows and sheep, and finally a class without property and reduced to work for others. These islands, like the Finnish mainland, are extremely beautiful, clothed with more luxurious vegetation than the mainland, covered with different kinds of trees, and the soil sometimes mixed with marl, though in large parts the islands

are pure granite. Most of the inhabitants are sailors or fishermen. The introduction of steam-boats has, of course, brought many changes, and caused a number of men to seek work abroad. When the men-folk are at sea the women-kind cultivate the land. This is the case also on the coast of the mainland, especially in Ostrobothnia, where there is also a large sailor population and a great amount of emigration.

The large farms, the "herregårdar," which are owned by gentlemen farmers, are found in the same proportion to other farms as is the case in Denmark and Sweden. They are more numerous than in Western Germany, but very few compared to Germany east of the Elbe or to the greater part of Austria-Hungary. They are nearly all found in the south of Finland, "where every manor is a monument and every church-yard a tomb of heroes." This is a part of the country famous in history, the cradle of Finnish civilisation. Here are found nearly all the old manor-houses, the "säterier" or "ypperliga frälse;" which number 260. Except for their entire exemption from the tax on real estate, which is to-day more of a rent to the Crown than a tax, no privilege now attaches to these manorial properties. Other properties formerly in the hands of the gentry, the "allmänna frälse," are partially exempt from taxation, because of their old obligation of feudal military service, by which they had to provide a certain number of mounted troops. Of the total units of taxation in the country, some 19,000 in number, only one-tenth belong to this class, which is more or less exempted from taxation, and most of these are situated in the south. We mention this because the "allmänna frälse" represents land formerly belonging to the nobles and gentry. The large farms (*i.e.* farms of 250 acres or more) which

are not exempt from taxation are found in still larger numbers in the districts of Tavastehus, St. Michel, and Vasa. In the same districts, especially in Vasa and Tavastehus, are also found a large number of ordinary peasant farms containing from 12 to 60 acres of cultivated land. In Uleåborg, the most northerly district, there are hardly any considerable farms, but a great number of small peasant farms.

In 1896 there were 900,000 acres in the hands of noble families against 4,000,000 held by them in 1862, this change being chiefly due to a fact about which we shall speak later, that the Russian estates in the south had been bought by the Finnish government. Of estates entailed in perpetuity there are now only nine left. The very large farms continue to increase in area. They are especially well adapted for the use of machinery and the sinking of capital, and respond to intelligent care more readily than the others. The smaller "herregårdar," on the contrary, are decreasing in number. One hears on all sides about the large number of upper-class families who are selling their farms to the peasant farmers, the latter being ready to buy because they live more economically and spend less on expensive kinds of labour. Many of these peasant farmers raise themselves into the upper class; their sons go to the University or obtain a superior education by some other means. The old families emigrate into the towns in order to educate their children, or because they have taken up new industrial and commercial occupations. Some great properties are now being turned into joint-stock companies. For the most part it is the timber business which is so dealt with, the companies having more facilities for working and disposing of the timber. They take better care of the forests, too, than the

peasant proprietors. In some cases the companies cultivate farms on their own account, the Jokkis Joint-stock Company, for instance, which owns some 70,000 acres, half of which is land under cultivation and only a minor part of which is let. Companies of this description have sufficient capital to take advantage of all the newest improvements, but this one has been especially enterprising, as it has built a 20-kilometre railway, and established several thriving industries on its property. It is by these industries and not by farming that the company is making money.

It is not only in England that the system of letting large farms prevails. This is the case in a minor degree in other countries with a social system more like that of Finland; in Denmark, for instance, where many large farms are in the hands of tenant farmers with thorough technical knowledge of their business. In Finland this is seldom the case, less frequently even than in Prussia. Perhaps technical agricultural education is neglected. More probably it is the interest of the owners to keep the estates in their own hands in countries such as Finland, where, as a rule, there is more than one kind of business, forestry as well as agriculture, and many other forms of paying industry. Besides this, there are many "boställen" or Crown lands, large or medium-sized farms which are let on a carefully-drawn lease for periods of twenty-five years. Many of these properties have belonged to the Crown from ancient times, and many of them were subject to a rather arbitrary proceeding known in Finnish history as "the reduction," by which, in 1680, lands granted by former kings to the nobles were taken back by the Crown. In recent times most of these farms, 800 in number, were made over to the officers of the army; the whole army, officers as well as

soldiers, being quartered on and supported by farms in different provinces. Nowadays, when the former army system has been replaced by the ordinary Continental form of conscription, these farms are let. Their total area is 650,000 acres, of which 125,000 are under cultivation. Besides the above, about fifty other farms belong to the State in the same manner, some of these latter being old royal manors; others formerly the houses of government officials; others having been bought by the Finnish government during their purchase of the old Russian domains; others belonging to hospitals and similar institutions. The total area of these is 55,000 acres, of which some 12,000 acres are under cultivation. Finally, the rectors and vicars of the Lutheran Church hold about 700 other farms, with a total area of 850,000 acres. This is about the same acreage as that held by the nobles, but is of less value, because many of these farms are situated in the north or in other poor districts. The wives of the clergy take great interest in the management of the farms, and, as a rule, this glebe-land is even better cultivated than the peasant farms.

In 1864, the exclusive right of the nobles to own land entirely exempt from taxation was abolished, and now anybody can own any kind of land. We shall deal later with the liberty now granted to every one to follow any industrial or commercial pursuit, and with the abolition of all guilds and close corporations. In every respect the old class privileges are abolished.

CHAPTER III

THE LAND LAWS OF FINLAND

THERE is one great difference between a self-governing people and those who are oppressed by their rulers or by a privileged class; that in the case of the former revolution is unnecessary. Violent change may, for some reason, be necessary in a country, and it may be carried out by a popular movement or by an autocratic decree, but it is always less happy in its consequences than a change due to free natural evolution. We see, for example, the immediate effects of the changes produced by the French Revolution; by the Hapsburg monarchy, and by the rulers of Prussia and even more of Russia, which illustrate the difficulty of revolutionising rural institutions; and the advantage possessed by countries where such measures are unnecessary. In Finland natural development is the rule, the only exception to it being that part of the country which was under Russian rule during the last century and was therefore organised according to Russian principles.

Throughout the greater part of Finland rural legislation has chiefly concerned itself with enclosures, that is, the abolition of the common property of parishes and villages, and the distribution of the intermixed acres of common village-fields among the several proprietors. These measures, which were essential to every kind of progress, have been of the greatest benefit to the people. "Storskifte," this re-distribution

into compact farms, was decided upon in 1750, a time when philanthropists all over Europe were working for the good of their kind. The work has, however, only recently been finished, and as late as 1848 some parishes in the east had enormous tracts of forests not only undivided among separate proprietors, but held in common by several villages and parishes. The work was, of course, imperfectly done at first, so that much had to be done over again and much to be entirely changed. Now, however, the farms have been more conveniently arranged, a number of farmhouses have been moved out from the villages, and the whole work of enclosure is being satisfactorily accomplished.

In old days the Kings of Sweden maintained a claim not only to the so-called Upsala Öden, but to all waste lands. Later on many of them (notably King Eric of Pomerania in the days of the Scandinavian Union, and other powerful rulers who were chiefly concerned about the State treasury and their private purse) enforced the right of any settler to take unoccupied land, the villagers who had rights in the woods not being permitted to hinder him. Gustavus Vasa declared that "waste lands belong to God, the Crown of Sweden, and the King." Charles IX. required the cottiers or torp-holders, the smaller settlers on this waste land, to pay rent to the Crown, and not to the bönder or peasant proprietors of the village. To-day the Crown lands have been separated from those of the peasants, the Crown retaining for the most part the big forests of the north where there are no villages, and also what is left over after the enclosure and distribution of the commons among the peasants. According to laws of the eighteenth century, 750 to 1500 acres (in some parts 2000 acres) are considered to be the proper maximum for each peasant.

After the organisation of the forest administration in 1859 and 1863, the authorities were inclined to prevent any settlement in the State forests, and to dispossess the tenants who were already there; this being the case not only on the forest Crown lands reserved by the State for timber-growing. When we remember that formerly there was complete liberty to use and settle on these lands, we cannot wonder that complaints were heard and had to be dealt with in the newly-revived Diet during the sessions of 1863-1864, 1867, and 1872. No fewer than 10,000 persons were, it was believed, living on these lands, most of the families residing there without having complied with the rules about the tax-assessment and so without acquiring legal right. In 1867, and again in 1872-3, measures were taken to secure the position of the men who had really cultivated this land. On the whole, the existing law, especially the provisions of the Forest Law of 1886 and of the Colonisation Law of 1892, is very favourable to the settlers, favouring them indeed at the expense of the Crown. It is not unlike the American Homestead Law, which gives grants of land on the condition of cultivating a small part and paying an insignificant fee. It has been decided that these Crown lands which are fit for cultivation shall be separated from the forest land, surveyed, mapped out, assessed for taxation, and offered to people who wish to settle. The settlers are to have an additional advantage; that for the first fifteen years they are entirely exempt from taxation, and have to pay only half taxes for the next five, while they may perhaps get this exemption extended to forty years. The taxation is very moderate, being only from two to twelve Finnish *penni* (i.e. from a farthing to a penny) per hectare. In the far north, where the common land

has not yet been enclosed and allotted, permission to settle may nevertheless be granted. Large tracts of land which are not adapted for agricultural purposes or for forestry may be treated as communal land and granted to villages or other associations, or allotted among the farms of the neighbourhood. Portions of this land may even be sold. Marsh land when drained can also be offered for settlement on the liberal terms which we have described. This and other land can be let provisionally until the final arrangement is made.

In fact, however, few persons have availed themselves of this new law, liberal as are its provisions. Between 1868 and 1896 only 466 such farms were established, some of these being already in existence and now only obtaining an acknowledgment of their legal status. The majority were formed in the north. With the means at command it has been totally impossible to finish the work of separating this land from the forests, surveying it, mapping it out, and so on. The Forest Administration prefers to make the holdings small ones and to let them. This arrangement, by which the land can be retained as government property, can be made without separating the large tracts of land which are to be retained as forests from the land which in the future will be given up to settlement. In 1869 there were 1300 of these small Crown holdings and 400 houses with less land, of which, however, about 200 were abandoned again, as frequently happens in the American settlements. In 1897 the number of small Crown holdings had increased to 2700, although some of these had been changed into freehold farms of the kind just described, or into small holdings for the forest guards. These Crown torp-holders are comparatively well-off; for the first twenty

years they pay no rent ; sometimes for the latter part of their period they pay only half or one-third of the agreed rent, which is itself less than the average rent paid to private landlords. It varies from one-fourteenth of the total grain and hay crops, which is the average in the far north (as in Kemi, for example), to as much as one-sixth in Viborg, one-fifth in St. Michel, and one-fourth in Tavasthus ; the pasture and timber from the woods often more than paying the rent. A lease is granted for twenty-five years with the option of renewing it for another twenty-five, the widow and children having the right to remain till the expiration of the lease if the husband dies. Compensation is paid for all improvements.

To fully understand the position of the settlers on the Crown lands, some further explanation is required of a certain Swedish-Finnish institution called "krono-hemman" or Crown farms. These farms, according to official statistics, represent about 1500 (or 8 per cent.) out of a total of 19,500 "mantals" or units of taxation ; another 16,000 out of this total representing ordinary peasant farms. In 1896 these krono-hemman were estimated to number 8000 out of a total of 117,000 farms. Originally the "krono-bönder" were tenant farmers under the Crown, as the "land-bönder" are tenants on private estates. In the course of time, however, they have obtained so many rights, that they are more like proprietors than tenants. Their rent does not amount to more than the taxes paid by the ordinary peasant proprietor. In early times they gained an exemption from all payments for a certain number of years, in order that they might take up the cultivation of waste land and abandoned farms ; they received such an exemption, for instance, in 1723, after the great war, and frequently again later, the last occa-

sion being in the recent colonisation law, which made provision for such exemptions. These tenants have also the right of inheritance, which right is even mentioned in the Act of Union and Security of 1789. They can also sell their rights in the holding. The Crown tenant can also change the condition of his tenancy into full proprietorship or ordinary fee-simple by the so-called "skatteköp"; that is to say, he has been able, since the middle of the eighteenth century, to convert his holding into an ordinary peasant property or "skatte-hemman," by an immediate payment of three years' (formerly six years) rent and taxes; and since 1858 he has been allowed to extend this small payment over a period of ten years. The tenant was merely not allowed to exhaust the farm, but even the proprietors of skatte-hemman, or ordinary peasant farms, were not allowed to do this. According to Finnish legislation, which has developed on the same lines as the Swedish legislation, even after the separation from Sweden, the possessor of a krono-hemman is peculiarly circumscribed in the disposition of his property at death; he is usually unable to give it away to any one during his lifetime, or dispose of it by will, and the widow has the right to retain possession during her lifetime. The farm may be divided, if each part can maintain a family. In arranging the heritage, it is necessary for one person to be responsible for the dues. If the eldest son, or other sole inheritor on whom the others may fix, cannot pay the share due to those others, they may decide by ballot who is to take the farm. One inconvenient practice already mentioned is a custom in the part of Finland known as Old Finland, which was under Russian rule in the last century, of several families continuing to live together on the farm. Although the krono-

hemman is based on the principle that one man shall inherit the farm, it has nevertheless been found necessary here to make an exception when the parties desire to continue a common occupancy. One man, the "host," has then to be in authority, and responsible for all dues.

It is a curious modern example of methods freely adopted in the times of our forefathers, that barely ten or twenty years ago waste forest-land was occupied and used in common by the peasants. This is a proceeding which might help to explain the much-debated formation of common fields in ancient and mediæval times. Ten or twelve peasants in the eastern parishes not far from the Russian frontier would arrange for the burning of the forests and the cultivation of the land for some years afterwards. This was done sometimes by a family, sometimes by a party of peasants forming a small informal company. The members of the company shared the profits according to the "axes" or number of persons whom they sent or brought. They went 80 or 100 miles into the woods with sledges loaded with everything necessary to pass the summer there. They lived in huts, felled the trees, and came again after the lapse of two summers to burn the trees and undergrowth, and sow and reap crops (generally rye) over an area of 20 to 40 acres. When they had decided which area they intended to burn, it was marked out on the trees, and these marks were respected by all new comers for the three subsequent years.

Though it has been generally unnecessary to interfere with the rights of property, a peculiar situation necessitating extraordinary measures arose in one part of the country. In Old Finland, the south-eastern corner of the country, ceded to Russia partly in 1721

and partly in 1743, Peter the Great and the Empress Elizabeth made large donations of lands, as they were accustomed to do in other parts of their empire. Men with well-known Russian names, Apraxin, Tchernisheff, Schuvaloff, Repnin, Vorontzoff, Trubetskoi and others, obtained hundreds of farms here, sometimes even a number of villages with thousands of inhabitants. These were granted at first for indefinite periods or for life, but later on were given as property to be inherited and freely disposed of. Most of the peasants were krono-bönder, or tenants with the right of inheritance and sale, some of them even being peasant proprietors. It was decreed that the nobles to whom these lands were granted should receive two-thirds of the revenue due to the Crown, the Crown retaining one-third; and in 1728 it was decided that the peasants should pay only the same amounts which they had paid when the country belonged to Sweden.

In time, however, the peasants began to suffer from acts of tyranny on the part of these new landlords, who, as was their custom in Russia, seized farms, and turned them into home-farms with manor-houses for their own use. Their Russian estate agents demanded that the peasants, with their horses, should work for the landlord instead of paying their dues in grain. The local government officials, many of whom had come from the Swedish part of Finland, were usually willing to recognise the rights of the peasants, but the Russian nobles were not used to tolerating such interference with what they regarded as their private business, and refused to recognise the jurisdiction of these government officials and their courts. Worst of all was the treatment meted out to the peasants at the imperial small-arms factory in Systerbäck, which demanded so much work, that the four parishes from which

it drew its labour had to be replaced after a time by another four. The local agent of the Alexander Nevski Convent in St. Petersburg even refused to give the peasants receipts for work and other dues paid to him, and this proceeding was quite a common one. Accustomed as such overseers were in Russia to demand work at their pleasure, they could not understand why they should not claim the same rights in Finland, and increase rents, and make what demands they pleased from the peasants. In a famous lawsuit between Baron Freedericksz of Taubila and his peasants, in the reign of the Empress Catherine, a decision was given by the Imperial Senate by which the landlord might increase the rent of his peasants notwithstanding the decision of 1728. When rent could be arbitrarily increased, the peasants themselves no longer profited by their own improvements. The Empress Catherine, in whose reign, notwithstanding her liberal professions, serfdom developed into such complete slavery that the serfs could be sold off the estates, gave donations in Old Finland of "souls with farms and habitations as eternal and hereditary possession." When the Russian system of military conscription was introduced, and young men were carried off to Poland and Turkey, while those who stayed at home had to build barracks and provide everything which was used in them, many of the young men fled the country, and the peasants tried forcible resistance, no fewer than twenty-eight peasant riots taking place in a few years. Furthermore, even in the time of Alexander I., demands came from the Russian nobles in Finland, especially from a certain Major-General Kopyeff, that the government should introduce into Finland a complete system of Russian serfdom, and permit the nobles to locate the peasants in big villages, where it would be easier to

control them. In a lawsuit between Count Orloff and his peasants, it was decided by the Imperial Senate that rent could be fixed by the landlord at his will, and that peasants who tried to leave their estates should be regarded as offenders against the Emperor and as criminals. The landlords would not even permit women to marry outside their estates without permission.

Alexander I., who had by this time conquered the whole of Finland, now decided that Old Finland, the Province of Viborg as it was then called, should be re-united to the rest of Finland. One of his reasons was a desire to improve the position of the peasants; their present position, he said, was well-fitted to make the inhabitants of the rest of Finland afraid of his rule. In this, as in several other matters, he acted on the advice of the Finnish Count G. M. Armfelt, and against the views of his Russian councillors. The officials, many of whom were Germans, were reduced in number from 217 to 89, and some incapable persons were replaced by better men from Finland. The Russian landlords would not, however, give up their demands; they were so persistent, that the Secretary of State for Finland in St. Petersburg, Count Rehbinder, recommended that the Province of Viborg should be again separated from Finland.

The nobles did not gain their point about the introduction of serfdom, but they obtained an official declaration that they were absolute proprietors of the peasant farms. Alexander I., who had grown less liberal than formerly, would not separate the province from Finland, but Count Zakreffski, the Governor-General of Finland, obtained the nomination of a Finnish Committee under his presidency, which was to decide the exact meaning of the letters of donation,

ignoring the previous rights of the peasants. He obtained from this committee a declaration that the landlords had the full rights of property, with the exemption from taxes (the so-called *frälse*) which they claimed; and with regard to their manors (which are known as *säterier*) some further privileges in the matter of taxation were granted. Those peasants who could furnish valid proofs that their farms were proprietary peasant farms, preserved their rights. Three senators, who were members of the committee, further recommended that the present tenants should be allowed to keep their original rights for their lifetime. Nicholas I., who had now ascended the throne, decided, however, that the estates were to be the absolute property of the landlord, even when originally they had only been granted for a term of years; but that, on the other hand, the peasants should retain their old rights for ten years, that is till 1837. The peasants continued a restive opposition, refusing to sign contracts, and working badly when called upon to work for their masters. Their labour, as a means of paying dues, had lost two-thirds or three-quarters of its ordinary value. Hundreds of farms were deserted, so that the tyranny of the nobles did not even benefit themselves. The movement was a curiously exact repetition of what we have seen before in other countries, where the peasants, by a change in social and economic conditions, have lost their rights in the soil, and sometimes lost their liberty with it.

In the more liberal days of Alexander II., when the Finnish Estates were once more convened in Diet, this matter was, of course, one of the prominent questions of the hour. The Emperor would not adopt the course recommended by the Finance Committee as

well as by the whole Diet, and examine the legality of the decree of 1826, which had given the full rights of ownership in their estates to the Russian nobles. It was thought better to make an attempt to purchase these rights, which were not really of any great money value, and then re-sell the farms to the peasants. These latter would, of course, be obliged to pay full value; to act otherwise would have been unjust to the taxpayers; and it was calculated that the purchase money distributed over the whole population would mean an increase in taxation amounting on an average to sixty marks for each family in the country. The nobles, it was thought, would be satisfied if they received sixteen and a half years' purchase of their rents. In 1867 the Diet gave permission to borrow 12,000,000 marks for this purpose, and the amount has since reached 17,500,000 marks. Some of the nobles sold at moderate prices;—Countess Varvara Mussin-Puschkin, for instance, and her husband Captain Kotchubei, and the Russian Department of Mines, which demanded only 1,250,000 marks for four northern villages with 12,000 inhabitants and immense forests, which were kept as State property. For certain other estates it was found necessary to pay more than the estimated sum; as, for instance, the estate of Prince Galitzin with its 5000 inhabitants, for which the owner asked 1,500,000 marks, the estate of Baron Freedericksz with its population of 8000, which was bought for 2,500,000 marks, and that of Prince Oukhtomski, which also contained a population of 8000, and for which 2,300,000 marks were paid. The estate of Kyyrölä has recently come into notice, because some of the peasants there sent, and induced the Emperor to receive, a counter-address to the addresses of the

Finnish people after the *coup d'état* of 1899, when the Emperor issued his famous Manifesto of February 15th. This estate consists of three villages which, early in the last century, were settled with Greek Catholic serfs, who had been drawn from the interior of Russia to occupy the numerous deserted farms of this district. The average price paid for all these estates was not, however, very high, varying between two and twenty marks per acre.

The farms have now been transferred to the peasants on such conditions that in hardly any case are they paying more than their old rent. They were supposed to pay 5 per cent. on the purchase money, but when the government was able to convert its loan, the interest was put down to $4\frac{1}{2}$ per cent. To this was added 1 per cent. for amortisation, so that they can become free proprietors in from 36 to 39 years. In some cases they received even better terms, for the value of the State forests was deducted from the price, while on some estates the landlord's manor was retained by the government, and valued at a higher figure. To some parishes large forests were allotted as common property, the wood of which is sold under government supervision at a considerable profit. As a rule, until the farm has been fully paid for, the peasants would not be allowed to sell wood. Some of the forests are, however, said to have been very badly managed, and it is suggested that too small a portion of them has been reserved for government forests. Some persons are inclined to think also that the peasants have obtained too soon the right to dispose of their farms. Too often they have found their way to the money-lenders in spite of all legal precautions, and under the form of a loan, have sold their wood, and sometimes their farms as well. It is not easy to

change the habits of a race which has grown up under harsh treatment. Progress, however, has been rapid. There are no more deserted farms. On the estate of Kronoborg, the home farm has been turned into an agricultural school, greatly to the benefit of the agricultural folk of the neighbourhood. Much benefit has been derived on the same estate from the settlement of Swedish peasants from Ostrobothnia, who came here after the famine in 1867-8. Many of the farms have only been transferred quite recently, because the process of enclosure had to be finished before it was possible to determine what each tenant had to pay. The whole reform is a remarkable example of a radical change, in which all private rights have been most carefully respected. We, for our part, believe that the English government would have done well to treat Irish land in the same manner, instead of depriving the landlords of part of their property, while at the same time they left the tenants discontented at not obtaining a clearly defined position. There is nothing better for the small cultivator of the soil than owning his land, and it is not impossible that it may one day be found expedient in Ireland to imitate on a larger scale the example of this northern country, and purchase big estates to re-sell to the tenants.

It was, of course, highly desirable that as many as possible of those persons who have no home of their own should obtain land. Finland is inferior to the most civilised countries of Europe, both in the number of its landed proprietors and in the number of persons entirely without homes, but it is far superior in both respects to the less civilised nations of Southern and Eastern Europe. There are better openings for workmen nowadays, and a larger part of the population can now live without homes of their own, and without

agreements for continuous work in one place. In 1895 the "unattached" population of Finland, as these families are called who have no fixed home, was more than a third of the total, having nearly doubled since 1877. They are especially numerous in the north and east, forming in some parishes as much as seven-tenths of the population. This, of course, creates a certain danger. It takes time to accommodate the habits of a population to new places and new circumstances. A large number of workmen do not at all desire any settled home, because they have to move about according to the locality of their work. This is the case not only with such workmen as navvies, but with part of the men who are engaged in Finland's great business, the lumber trade. Here, as in the United States and other countries where this trade is conducted on a large scale, there must necessarily be a number of workmen who at certain times of the year live out in the woods in temporary huts. Besides, in order to settle down successfully on the land, a certain amount of capacity and also of money is necessary, even if the settlers become torp-holders and not proprietors. It was regarded as an advance when the torp system was introduced from Western Finland into certain eastern parts, where many of the peasant proprietors are not as advanced as those who rent land in the western districts and pay their rent in labour. These, also, in order to make the best use of their holdings, must possess a certain capacity and capital.

It is always desirable to remove obstacles in the way of dividing up the land. Such obstacles in the past have been mainly fiscal; the subdivision of the peasant farms, for instance, would have jeopardised the ability of the peasants to pay taxes. Since 1864 several laws have been passed to facilitate this sub-

division. According to the land law of 1895, however, it is still illegal to subdivide a farm into smaller areas than twelve acres; in any case a holding of this size must be responsible for the whole tax. This prejudice against very small holdings, however mistaken, is not confined to Finland. There is no object in trying to retain any particular class of peasant, either when it is proposed to subdivide land or when farms are being amalgamated by large proprietors. It has been remarked that the facilities for owning small allotments have been made use of more by inhabitants of towns, who have bought land, than by agricultural labourers. It is, of course, an excellent practice that town-folk should buy land in the country. It has become very noticeable in the Eastern States of North America, where thousands of farms have been deserted owing to the fall in the price of grain and the competition of the richer farm lands of the West, and large numbers of these abandoned farms have been acquired by persons in the neighbouring cities, to whom it is not only a pleasure and recreation during the summer to farm their land, but who can also cultivate it with better result than the poor and uneducated men who formerly owned it. Any movement in this direction is good.

In 1887, it was resolved to lend money without interest in order to aid the formation of torps or small plots of land for labourers in the eastern district of Kuopio; and in 1892, another fund was opened to help the subdivision of estates in other parts of the country, especially the district of Vasa in the barren interior of Ostrobothnia. It is a characteristic fact, however, that many of the new proprietors, who had obtained their holdings in this fashion, hastened to re-sell them to other people. It is highly important that the credit system should be enlarged so that

small owners of land may obtain loans easily; the present institutions for the purpose should be developed, or new associations formed. The Hypotheksförening (the Crédit Foncier of Finland) does not lend money on any property of less than 6000 marks in value. Other funds, formed in 1892 and 1896, were consolidated in 1899 into one fund of 550,000 marks, to be used for the purchase of small building lots or plots of land for homeless persons, or for the clearance of new lands, woods, moors, or marshes. The money is lent to parishes, agricultural societies, or other such institutions, for forty years at 2 per cent. interest. They may either buy land, or re-lend the money for this purpose to private persons, keeping only 1 per cent. profit for themselves.

A curious episode may be narrated in connection with this matter. At the beginning of 1899, at the time of the *coup d'état*, there appeared suddenly in Finland a number of the pedlars who come there sometimes from the Russian province of Archangel, and are often men of Finnish race speaking the Finnish language. These pedlars went round the country promising that all landless persons should receive land from the Russian government at the expense of the present proprietors. Such emissaries are often employed by the so-called Society of Charity in Moscow, which works really in the interests of Panslavism, and often in close connection with the Russian government. Political agitations have been started by them in several countries, in Bulgaria, for instance. The lower classes in Finland, who are as patriotic as the upper, did not receive these emissaries at all kindly, and demanded that they should be prosecuted; it being illegal for foreign

pedlars to go about in Finland. Some parishes used the funds out of which rewards are paid for killing wild beasts for the purpose of prosecuting and punishing the pedlars. A decree has now, however, been published under an order from St. Petersburg—illegally, because no such matters can be decided except by order of the Diet—permitting these pedlars to sell their wares in Finland. The Finnish people, who were perfectly willing before to do business with these Archangel traders, have accordingly decided to boycott them, and nobody will now have any dealings with them. There is a fear that if the hawkers are successful, they will settle in the country, bring other settlers of the Greek Orthodox Church, and so furnish a pretext to the government of St. Petersburg for establishing Greek Orthodox communities and churches.

Shortly after the incursion of these traders from Archangel, the Emperor decided that two million marks of the surplus on the Finnish budget should be used to assist men without means to obtain land; and a committee has been formed to arrange for the most advantageous employment of this fund. It will not, of course, produce any very important results compared with those brought about by natural development. In a country like Finland there is seldom any difficulty in getting land; we have to look for the necessary capacity for using it.

The usual measures have been taken in Finland to enable workmen to provide their own homes in towns. We may mention as one example a system which we have studied in the city of Åbo, by which cheap houses can be bought by the payment of small instalments hardly larger than the usual rent. A minor detail of this arrangement is that the purchasers of the

houses have rooms to let to the numerous workmen who are satisfied with lodgings; and the purchasers can thus facilitate their own payments. This practice of poor people living in large numbers with one another is a peculiarity of the life of the common people in Finland, an evidence, indeed, of their good nature, but not without its drawbacks. Many other examples might be quoted of arrangements made for providing working men with homes, arrangements undertaken either by the men themselves or by their masters, as is the case in other countries, and is natural in the case of a country so advanced as Finland. The government is authorised to lend money for this purpose for long periods either to the municipalities of the cities or to companies, the interest being $3\frac{1}{2}$ per cent.

CHAPTER IV

METHODS AND CONDITIONS OF AGRICULTURE

THE greater part of Finland is not adapted for agriculture. Geologically the country belongs to the Scandinavian peninsula, and not to the great plain of Eastern and Northern Europe. It consists mainly of granite, gneiss, and glacial formations, the greater part of which is poor soil for agricultural purposes. Lakes and rivers are numerous, 11 per cent. of the surface being water, or as much as 19 per cent. in Central Finland, in Savolaks and Carelia. The lakes are large hollows formed by the pressure of ice, as is the case in Scotland, and are even more numerous than those in Scotland, because the glaciation in Finland seems to have taken place late, and the consequent formations to be therefore in a relatively unfinished state. Land and water are not yet fully separated. In addition to the lakes, swamps and enormous bogs cover one-fifth of the country, or nearly half in some parts of the east and north. The surface consists of glacial formations, partly changed by the action of the sea after glaciation; that is of gravel formed of stones, brash, pebbles, and sand, with a substratum of granite rocks, and often littered with piles of loose boulders. On the other hand there are also large plains, chiefly formed in the post-glacial period when a part of the country was covered by the sea, these plains being clay and comparatively fertile. They are found chiefly in Ostrobothnia and in the south, in Finland proper

and Nyland and Carelia, where also there is a comparatively denser population, and whence comes most of the grain. In comparison with Sweden, Finland has more flat country, though its plains are hardly so fertile as those of Upland, Westergötland, and Scania. As a consequence of the prevailing geological formation, the soil contains a good deal of potash or kali. On the other hand there is not much chalk or limestone. There is some chalk or marble in the south-east, and shells useful for agricultural purposes are found in Nyland, in Central Ostrobothnia in the fertile regions of Vasa and Kyro, at the old convent of Nådendal near Åbo, and on the island of Åland, where also there is some good marl. The whole of the land used for agricultural purposes does not amount to much more than a tenth part of the country, of which hardly 4 per cent. is really under cultivation, and 5 per cent. is grass land. The land under cultivation and capable of cultivation is, however, increasing rapidly. Finland is north of the line where the surface of the earth rises gradually above the sea-level, and it is now continuing to rise at a rate varying from .6 metre per century in the Gulf of Finland to 1.5 metres in the north of Ostrobothnia. Still more important is the draining of the lakes and marshes, due partly to natural causes and partly to very profitable labour. Even in Nyland, where cultivation began at an early period, the amount of land under cultivation has increased by more than one-third since the beginning of last century. Large marshes have been and are still being drained in the northern part, especially in the province of Uleåborg. The government assists with money, which is lent through the medium of the parish authorities.

We have already spoken of the harsh climate. The

August frosts, as well as those of the spring, at which time there is often a long drought, are a serious disadvantage. In the north the winter lasts eight months, in the south five months; and Southern Finland has an average temperature of 9° Fahr. above freezing point for the whole year against 5.4° below freezing point on the river Jenissei, and 7.2° in Kamtschatka in the same latitude. Grain ripens well in the far north of Finland, and barley in the farthest north of all. We find barley as far north as the pine; the six-row barley farthest north; the common four-row kind, which we generally call six-row, farther south; and the more valuable two-row kinds (such as the English Prentice barley) farthest south of all. As a rule barley predominates among the grains grown north of 63.5° ; it was the first grain cultivated, the Finns having been in possession of it before they came into the country. For a long time nearly all bread was made of it, and it is still the staple article of food in parts of the east as well as in the wilds of the north. In the north-east a special kind of barley-bread called "rieska" is baked in moulds made of birch bark. The Swedish name for barley, "bjugg" (Danish "byg"), is the same as is used in Northern and Eastern Danish England. Rye, which was introduced by the Swedes in very early times, superseded barley to some extent in the eighteenth century, and still later it was largely replaced by oats. In the fourteenth century rye was cultivated only in parts of Southern Finland. In the eighteenth century it became, however, the most important material for bread, and is now cultivated as far as the 64th and 65th degrees of latitude. In the years subsequent to 1870 the cultivation of rye increased enormously, but later still, after 1887, it gave place to oats. Wheat has only recently, and to some extent, been introduced

in the south, but its introduction has apparently been a success. Oats grow as far north as the Arctic circle, and have increased in value with the increase of dairy business. They are especially well adapted for newly-tilled land; and more room has been given to them in the recent and more scientifically arranged rotation of crops, in which, after the green crops, a place is found for other grains than those needed for bread. Finally, there is now less difference in price between the grains, which is to the advantage of oats. In Eastern Finland oats are also used for bread; but mainly they are used for cattle-food, for which there is now a greater demand. They are also exported. "Hafre," the Swedish word for oats, is almost the same as the "haver" of Northern England. In the period 1866-70 rye represented 48 per cent. of the total harvest, barley 28 per cent., and oats only 24, but in 1891-95 oats had advanced to 47 per cent., rye decreased to 36 and barley to 16 per cent. of the total. In the province of Uleåborg, in the northern part of the country, barley still represents more than 60 per cent. and oats not 10 per cent. of the crops.

A peculiar process is the Finnish method of drying the grain in special houses, "riar," as they are called. In the late and cold harvest season the sheaves are dried first on stakes and then, according to the custom of all Finnish peasants, in the riar before thrashing. For this purpose the peasants make free use of their abundant fire-wood, burning a fire for three or four days in a peculiar oven without a chimney, which is used also for various other purposes. This method of drying the grain by heat and smoke kills the insects which destroy the germs of the grain, and this is one of the reasons why Finnish rye from Vasa or from Nyland is so highly valued for seed purposes.

Formerly, before the present duties checked this class of import, the Swedes preferred to use Finnish rye as seed; they could manage with a smaller quantity than if they used their own rye. Very possibly other countries would find it profitable to adopt this former practice of the Swedes. The great farms often dry their sheaves of rye, especially for seed; while with other kinds of grain they do not take this trouble, but only dry it after thrashing, as is done in other countries. Buckwheat, used chiefly as human food, is grown on some of the burnt-over lands in Eastern Finland. Hemp, as well as flax, has been grown in the country from very old times; the Kalevala, the great Finnish mythical epic, dating from the later days of Paganism, speaks of both, as well as of the common kinds of grain; but hemp is not much cultivated now, and only in Eastern and Northern Finland. Flax, which is well adapted for newly-cultivated grass land, is more largely used, and is in considerable demand in the country round Tammerfors, where linen is manufactured. It is more carefully tended here than in Russia, and is therefore whiter.

In addition to the ordinary turnip, which has recently been introduced into Finland, a particular variety, yellow in colour with red or green tops, was grown formerly to a considerable extent in the ashes of the burnt forests. This variety can be grown as far north as the lake of Enare ($69\frac{1}{2}$ degrees), and is still used there, as well as in the east, for human food. Generally, however, it has been abandoned for the potato. In the south, mangels are grown successfully; and in a district near Åbo, where a factory for producing raw sugar from mangels was established, it was suggested that the mangels contained as much sugar here as they do farther south. The factory, however,

failed. The growth of turnips and mangels, which are well suited to the rich newly-drained peat-bogs and marshes, will, of course, be much increased by the extension of dairy business.

Among cultivated grasses the Timothy grass (*Phleum pratense*) is the most valuable. Experiments have been made with other grasses adapted to a northern climate, and it is found that the Alsike clover (*Trifolium hybridum*) succeeds well. The red clover suffers from the frost, especially in the far north. Other grasses, particularly the fox-tail meadow grass (*Alopecurus pratensis*), the ordinary orchard or coxfoot grass (*Dactylis glomerata*), the meadow or tall fescue (*Festuca elatior*), one of the brome-grasses (*Bromus arvensis*), and still others are now cultivated. On uncultivated land, especially if it has been burnt over, several valuable grasses, largely belonging to the same families, are found, even the celebrated blue grass of America (*Poa pratensis*). In wet meadows there are, of course, plenty of the common sedges and rushes, which are not without value. On the whole, the natural pasture land is of very varying value, from the poorest pasture land which is found in many of the woods, to the fine meadows which reach their largest area near the big rivers of Ostrobothnia, as well as by the Vuoksi and the Kymmene and other minor rivers in the south. In the province of Uleåborg in the north and in Vasa, it is still the custom to send cattle to distant pastures for the summer and keep them under supervision there.

The result of grain cultivation in Finland is not very great. Nevertheless, as is generally the case in Europe, where a regular rotation of fallow and green crops is the custom, it is superior to results gained in the United States, where also the inclement climate in

most of the States exposes the grain to several dangers during the most important period of its growth. On an average rye and wheat return 7 for one (up to 1866 it was only 6 for rye); barley about 5 for one, and oats $5\frac{1}{2}$ for one (against 4 in 1866). The value of the whole harvest in 1895 was estimated at $45\frac{1}{2}$ million marks of rye, $17\frac{1}{2}$ million marks of barley, 36 millions of oats, $1\frac{1}{2}$ millions of peas and beans, 1 of mixed grain, $12\frac{3}{4}$ of potatoes, and only half a million marks of turnips. The total harvest amounted to $114\frac{1}{2}$ million marks. The harvest of 1896 was estimated at 136 million marks; and these amounts will be considerably increased with the development of the dairy business. The production of grain has increased largely during the last generation; it doubled in amount between 1861 and 1895, and its proportion to the population has increased from less than $4\frac{1}{2}$ hectolitres per head in 1866 to nearly $5\frac{1}{2}$ hectolitres per head in 1896. Moreover, the consumption has increased still more rapidly, and Finland cannot now produce sufficient grain for its own use. The fact that importation has increased even per head of the population during the last few years may be regarded as a proof that the country is growing in wealth and prosperity.

The old Finnish method of agriculture was to burn down the woods and sow seeds in the ashes round the roots and stumps. This is profitable enough for the persons who do it when neither the timber nor land is of much value. Indeed, during the last generation peasants have even grown rich by this method, which is called the "svedje-bruk," its more successful practitioners having been known as "svedje-kings." But in modern times, when timber and land are both valuable, this method means the destruction of capital.

The government tried some hundreds of years ago to stop this method of cultivation; and it has now been decided that the burning of the forests may only be repeated at intervals of thirty years where the forest is of hard wood, at intervals of forty years where it is soft wood, and not at all on stony soil or rock thinly covered with humus, or in pine-forests with heath or sandy soil; while only two crops may be taken after the burning. Some of these restrictions must be regarded as a mistake. In Western Finland this forest burning is now very little practised, though it is still common in parts of the East. Over the whole of Finland only a small percentage of the grain harvest comes from this method of cultivation, though more than half the harvest is so produced in Carelia and Savolaks (parts of the present province of St. Michel and Southern Kuopio) and some other parts of the country. The first crop after the burning sometimes gives a return of 50 to 1, and when it is no longer possible to get good harvests of grain the grazing is fine for some years afterwards. To burn the mosses and undergrowth when the timber has been removed is often desirable. As a rule it is better to use burnt forest land for some years for grain production, and afterwards for grazing purposes, and plant new woods on old worn-out grass land and heath. These burnt-over woods are used for agricultural purposes in France (where the process is called "sartage" or "écobuage"), in the Ardennes, in the Alps, and in Germany, notable examples being found in Odenwald. A far more pernicious practice is the burning of old grass land, the fire being covered in with turf and allowed to burn downwards. This has been done on low ground bare of trees, and the land then made to yield crops of oats till it is completely barren.

The old rotation of crops in Finland, as in most of Northern and Central Europe, is to plant two out of three fields with grain. In Finland the two-field system also has been much used, because it was thought advantageous and cheap to cultivate rye in alternate years, allowing the fields to lie fallow in the other years. This is still extensively done in Upland, the part of Sweden opposite Southern Finland, as the best means of producing wheat in loam or clay soil. It may pay so long as land is of little value and when sufficient pasture land is to be found elsewhere. To-day, when it is desirable to cultivate oats and grasses on the plough land, a better system of rotation is being introduced and is now common over large districts, especially on the big farms; while, on the other hand, the peasants retain the old rotation. In the north the cultivation of artificial grasses is neglected.

To carry out this scientific system of rotation it is necessary to produce more manure; and for this purpose farmers have begun to import several kinds of artificial manure, kainite, crushed bone and phosphates, especially the Thomas-phosphate from ironworks, to the value of about 500,000 marks a year. An import duty has been put on salts from Stassfurt and on nitrates. Crushed bone is produced in Finland.

In old days farming implements were used in Finland which were unknown in other parts of Europe, indicative of a backward stage of development. Some were especially connected with the burning of the forests. Among these is the forked plough, a very old implement consisting of two long forks which move the earth without turning it over. It is an even more elementary implement than the angle-plough of the Slavs, which in ancient writings was described as

peculiar to them: The Romans and Teutons used the "aratum" or turning-plough, supposed to have been introduced into Finland by the Swedes. Another very primitive implement is the branch-harrow, formed by a bundle of branches or fir-tops, the stumps of the branches being left on and used as harrow teeth. The fork-plough and branch-harrow are still used by the peasants of the east. Side by side with these ancient implements in many parts of the country we now find the newest models. Every sort of machine is now in use, up to steam ploughs and an electric thrashing-machine. Many implements are imported from England, Sweden, and the United States, but many more are now manufactured in the country. In 1885, when the Customs tariff was revised owing to some antagonism between Russia and Germany, a small duty was put on farming implements and machinery; the duty was trifling, but it was a hindrance to the importation of certain kinds of heavy machinery. The variable amount of such imports, which at one time showed an actual decrease, is due chiefly to the establishment of machine manufactories in Finland. Recently machinery has once more been imported from other countries in comparatively large quantities.

No animal is more beloved by the Finnish peasant than his horse. The horse deserves it, being strong, speedy, and patient. When the question arose of improving the stock by foreign blood, the stallions from the Norwegian Gudbrandsdal were preferred; but the well-built though not very large Finnish horses, usually roan, bay, or brown, compare most favourably with the best Norwegian horses. They number about 300,000, and though the number is not increasing, as could hardly be expected in these days

of mechanical forces, it is not decreasing. The great progress of agriculture naturally demands more horses. Formerly a considerable number were exported to Sweden; but Sweden has now imposed a duty of 100 kroner per horse on such imports, and more horses are now sent to Russia. It is remarkable that a considerable number are found near the river Torneå, and it seems that thousands of horses pass this frontier by themselves—which is one way of evading the bad effects of import duty. The Finnish horses sent over to Sweden to take part in trotting-matches invariably won, until the Swedes deliberately raised the height of the competing horses, so excluding the Finnish competitors.

Finland contains about 1,100,000 sheep, and the number does not appear to increase much. On the large farms, indeed, the number has decreased considerably; as is the case in several other northern countries, where it is now found more profitable to increase the number of cows. The number of sheep owned by the poorer class of peasant is, however, increasing as they grow more prosperous; so that in the west, where the peasants are better off than in the east, the number is larger. The breed is a very poor one, owing to the barren pastures and to lack of attention during the winter; but it is being improved by the importation of southdowns and other English varieties suited to the country.

In the farthest north, on the tundras of the Lapps, the reindeer is invaluable, and no other animal could take its place. It not only provides milk, meat, and skin for clothes and other purposes, but it does the work of the horse, three reindeer being able to draw as much as one horse. For some years the number of them decreased steadily, partly because the wandering

of the Lapps over the Norwegian frontier was no longer allowed. Between 1880 and 1897, however, the number increased from 53,000 to 117,000. The government foresters complain of the destruction of the forests by their trampling and grazing, more than of the valueless trees being felled to get lichen for their food. When the rein-lichen is not found on the tundras it takes from 60 to 100 trees to provide food for one reindeer.

Cattle are growing in number faster than any other animal; between 1865 and 1897 they increased from 1 to 1½ million, the cows alone increasing from 671,000 to 1,080,000; and the numbers must now be still larger. In certain parts of the country, notably in the backward districts of the east, it was the custom to keep a large herd of cows, extravagantly large in proportion to the extent of cultivated land. There was ample pasture during the summer, and the cattle had to get through the winter as best they could. Now the number of cattle is increasing in the wealthier districts and on the best managed farms, where they are no longer regarded as a necessary evil chiefly useful for the obtaining of manure, but as a source of considerable profit. On the large farms we find a mixed breed of different races. Among imported cattle the Ayrshires are preferred, and, as in Sweden, are found to be well suited to the pasture land of the country. Some valuable animals have been obtained, for instance, from the herds of the Duke of Buccleuch. Good Ayrshire cows give about 2300 kilos of milk, red imported Danish cows about 2900, and Jerseys an even better result. At present the Finns have great confidence in their own breeds, which can be improved and developed, they think, to suit the characteristic features of their pastures. In the north is found a

small white polled cow, closely related to the Swedish cow from Jämtland; this is a small mountain breed, found chiefly in the country along the Torneå and Kemi rivers. The breed which the farmers are now especially trying to develop is a little larger than these, and found mostly round Kiuruvesi in the north-east. It is light red in colour with white spots, mostly with a white head and a white line on the back. In Southern Finland the breed is rather larger, and more often dark red in colour, or sometimes white with red spots. A cow of Finnish breed usually weighs about 660 pounds and gives from 1300 to 2300 kilos of milk per annum; the milk being fairly rich, so that from 17 to 20 kilos go to a kilo of butter. It is a question, however, whether the better class of farmers will care to wait for the development of these native breeds. At the cattle-shows to-day cows of Finnish breed meet with especial recognition, as do also, to some extent, the Ayrshires.

Coincidentally with the increase of dairy business, more pigs are kept; though at present there are only some 200,000 of them. The Finnish pig is accustomed to living in the woods and on the pasture lands, and does not therefore fatten as rapidly and cheaply as is desirable. The ordinary good English breeds are being imported. The duty on maize in Finland, as in Sweden, is a great difficulty in the way of keeping and fattening pigs; it is 2 marks 25 p. per 100 kilos on all maize coming from other countries than Russia, and to bring it from Russia does not pay so well. The duty on maize is also sufficient to prevent any profit from poultry-keeping on a large scale, a business which has not met with much attention in Finland. The Danish farmers regard the free import of maize as one of the main reasons why they are superior to

Sweden in the production of bacon and eggs, so that they can even export both to Sweden.

The total value of domestic animals in Finland to-day is more than 100,000,000 marks. The figures in 1895 were estimated to be as follows: Horses, 27 millions; reindeer, $2\frac{1}{2}$ millions; sheep, $6\frac{1}{2}$ millions; cattle (including bulls and calves), $62\frac{1}{2}$ millions; swine, 4 millions; poultry, about half a million; the total being 104 millions. The export of animals in 1899 amounted to $26\frac{1}{3}$ million marks against an import value of 3 millions.

For the moment the progress of the dairy business appears to be the most important feature in Finnish agriculture. Cheese-making has not yet become an important item of it, though on many large farms a good Gruyère is produced, and the manufacture of several finer kinds has lately been attempted. But it is the production of butter which, in Finland as in Denmark and Sweden, has attained the greatest importance, and yet larger results are expected. Butter in Finland is mentioned in early Christian times, when the bishops spoke of butter as part of what was paid to the priest by peasants in the islands and other parts of the country. In more modern times, some generations ago, the peasants in the east, in Carelia and Savolaks, understood the art of making good butter during the summer. In winter the cattle were too poorly fed for butter-making to be possible; but at this time of year the more skilful peasants of Ostrobothnia had butter for sale. After the hard years of 1864 and 1868 great efforts were made to arrange a larger export of butter. At first the export consisted of peasant butter, which naturally was not of the finest quality; but in 1870 the use of cold water and ice, an ex-

cellent method first employed by Herr Swartz, on the Hofgård near Norrköping in Sweden, was introduced into Finland as well as into other northern countries; and it was largely due to this that some years later, in 1880, the owners of the "herregårdar" or gentlemen farmers, began to export good butter. On the other hand, after 1870, the peasants had less butter to sell; this was the time when they were beginning to make more money by selling timber, and, as a consequence, they lived more comfortably than formerly, and the peasant butter was consumed in the country itself. From 1868 to 1884 the export barely exceeded 5000 tons a year, but after the latter date Finland followed the example of Denmark and introduced large creameries, which collect the milk of the peasants, and make it possible, by a scientific method of production, to realise comparatively high prices. As a consequence of this, the cattle are better tended, especially in winter time, and agriculture in general is improved. In Finland to-day, as in Denmark, thousands of these creameries have been established, many of them being of some considerable size; and this is the case not only in the more advanced districts of the south-west, and in the two Ostrobothnian provinces of Vasa and Uleåborg, but also in the once backward north-eastern district. The Finnish creameries are not formed into co-operative associations so often as they are in Denmark; a relatively large number of them have been established by men of means, who buy the milk from their neighbours. In connection with the creameries, some skimming-centres have been established, and many of the peasant dairies use hand-separators and other improved machinery. Of late, however, the co-operative movement is spreading in Finland. An

interesting experiment is being made by Herr Arthur Borgström, who has established a large creamery in the port of Hangö, and who buys frozen cream, using a method which resembles that in use in Denmark to freeze part of the milk. From about fifty stations, some of them hundreds of miles away, and some yet farther off in the eastern part of the country, cream is now sent to Hangö by railway. During the week the peasants pour one lot of cream on another, the whole being frozen to a soft mass; then once a week a man takes the cream of the whole neighbourhood to the station, so minimising the expense of transport. The whole business of these big creameries is new to Finland, but it is admirably worked. The machines are foreign, partly English, and the special dairy machinery usually comes from Denmark. The industry, however, as has been said, is in its infancy, and could be developed considerably by obtaining better cows, better food, and more scientific cultivation and rotation of the crops. The export of butter increased to thirty million marks in 1897. It has decreased slightly since then, merely because the better wages and generally increased prosperity of the past few years have permitted the people to use more butter as well as other luxuries.

To forbid the import of margarine was a mistake; the great consumption of it in Denmark, for instance, increased the export of the more valuable butter. Denmark itself, the country which has to some extent been copied by Finland in its dairy work, has not entirely escaped unwise legislation in this department of its industry. The colouring of the margarine has been forbidden, and conditions have been imposed on its sale, some of which limitations have induced Danish manufacturers to establish factories for mar-

garine in England instead of Denmark. Finland has not followed Denmark in its over-hasty legislation about the Pasteurisation of the milk; legislation which necessitated an immediate change in dairy implements, steam-engines, boilers, and even buildings; and this though it has not yet been decided whether Pasteurisation decreases the value of milk as food!

The creamery business is the highest development of modern agriculture in Northern Europe. It does not interfere with the production of grain; on the contrary, as we see in Finland, this increases with the better care and feeding of cattle. The creamery is a manufacturing business which, in its whole character, and owing to its demand for co-operation, presupposes a considerable development in the education of the people; and for the same reasons it will produce a noticeable economic result. What has already been done in Finland testifies to the high state of education there. It is absolutely astonishing to read in a journal which is now published simultaneously in Finnish and Russian by an arrangement of the present Governor-General, a series of articles asserting that the country is being pauperised by this creamery business, which, according to the writer, uses up all the grain and grasses, and necessitates the importation of extra food for cattle. The right thing to do, says this semi-official organ of the Governor-General, is to produce more rye, use it for the distillation of the form of whisky known as brännvin, and use the refuse as a cheap food for cattle. The Finns themselves, on the contrary, hold the same opinion as the Swedes, among others, that it has been a great step in advance to replace the numerous small distilleries by creameries, which are far more profitable and have

none of the evil accompaniments of distilleries. The Finns have, as we shall see, diminished their consumption of whisky, or *brännvin*, by one-half.

The total agricultural products of Finland for 1896 have been estimated at 306 million marks of grain; 1100 litres of milk per cow, which, allowing for 1,100,000 cows and a price of 10 *penni* per litre, represents 121 millions of marks; and finally 50 millions for meat, eggs, &c. It ought to be possible to double this total within the next few years; since in Denmark the same number of cows is estimated to produce more than double this amount of milk, or a total of 200 million *kronor* against an expenditure of 150 millions; and the Danes are increasing their production every year. The Finns have ample room for expansion.

The Finnish government has, as a rule, ably seconded the efforts of the farmers. In 1892 a Board of Agriculture was established, and the government has given advice and technical assistance, lending the services of engineers, experts in agriculture and dairy work, and other specialists. Models provided by Sweden have been adopted and improved upon; and experimental businesses have been established. For years an excellent school, due especially to the efforts of Herr N. Grotenfelt, has been in working order at Mustiala; later on, as has been mentioned, another school was established on the estate of Kronoborg, and a whole series of dairy schools and lower-grade schools was founded on farms belonging to the government or on private farms. Higher grade agricultural instruction is now being introduced at the University of Helsingfors. It is sometimes asserted that in addition to what has been done for the education of the upper-class farmers and their assistants, more might have

been done for the peasants ; but there is this difficulty, that the present Russian Governor-General is not in favour of the peasants obtaining, as they wish, a general education together with technical knowledge. It is a noteworthy fact that the peasants send their sons to school in larger numbers in bad years, when there is less to do in the country. Schools in Ostrobothnia have very few pupils just now on account of the great increase in emigration.

In Finland, as in other countries, much good work has been done by private associations. The Imperial Economic Society of Finland, with headquarters in Åbo, was established at the end of the eighteenth century. To-day "Hushållssällskaper" exist in each separate province ; also parish associations ; a large dairy association, which is making vigorous efforts to organise the sale of butter in England ; an association, established in 1894, for the cultivation of peat-bogs ; and several others. Co-operative associations were formed, too, on Danish models, not only to work creameries, but also for other purposes, such as the purchase of artificial manure ; and a new law has been passed laying down general regulations for them, requiring a written agreement among the partners, and so on. Only associations which grant loans need government sanction. Such societies and other forms of co-operation, with judicious assistance from the government, contribute considerably to a country's progress.

Up to the present time the dwellers in the immense Finnish Lapmark, the Finns themselves as well as the few Lapps, have lived almost exclusively on their reindeer and the proceeds of their fishing. Now, on the representations of the Diet, a committee has been formed to examine into their situation and to

propose measures for their improvement. Experience proves, as the Diet points out, that barley and rye ripen high up in the northern country, and roots grow in the farthest north, while prairie land is certainly plentiful; but nobody has ever thoroughly gone into the matter or considered the possibilities of these vast regions.

Several State funds have been formed for lending money to establish dairies, and to cultivate peat-bogs and other unreclaimed land. Thus in 1851 such a fund was formed, and in 1885 another of 2 million marks was voted to be lent without interest to parish authorities, and by these re-lent in small amounts to private persons at the low interest of 3 per cent. At the same time more money was granted to be lent for the reclamation of moors and peat-bogs. The first fund was exhausted very soon, 300 parishes asking for loans, and it was decided to use three-quarters of the second fund in a similar fashion, lending it to the Communes at 3 per cent. By the end of 1898 rather more than 3 millions had been lent to the parishes; and these had themselves formed funds out of the interest received amounting to more than 750,000 marks, which they are re-lending. All this, however, is not sufficient. The methods savour too much of officialdom, and central control is difficult even when the loans are arranged through the communal authorities. In fact this low interest makes the loan an act of charity. Up to the present time, however, most of the capital used for agricultural improvements has been obtained by selling timber.

It has now been decided to establish a new central institution for lending money to co-operative associations. The government will grant a subvention for the cost of administration, and may also assist in other

ways. The institution, it is suggested, will require a capital of 300,000 marks, which may later be increased to one million; the shares being at first all taken up by the existing co-operative associations. It will lend them money on mortgage and personal security, discount their bills and receive their money on current account, or on deposit, on the same terms as the savings banks. These measures are considered necessary in order to assist the small farmers, who find the ordinary banks difficult of access.

We must admit that for our own part we have more confidence in the development of the ordinary credit institutions, the banks with their numerous branches, the savings banks and mortgage associations, which would become still more useful to the small landed proprietor if they would continue to decrease their limit of values on which money is lent, a limit only recently lowered from 8000 to 6000 marks.

CHAPTER V

FORESTRY

FINLAND is one of the best wooded countries in Europe. The woods in Finland occupy a larger space than all the pasture land contained in Great Britain and Ireland; while Finland itself is as big as the whole United Kingdom, with the addition of Holland and Belgium. More than half of the country—it is said as much as 64 per cent.—is covered by forests. The true forest land, on dry soil, is generally reckoned at 46 per cent. of the surface of the country, or four times as much as all the agricultural, plough and prairie land put together. But in addition to this, much of the remaining 54 per cent. (consisting of morass, bogs, lake, and rock) is partially covered with trees. Some people reckon that the marsh land in which pines are found is 30 per cent. of the total wooded area. The whole country is about 90 million acres in extent, of which $36\frac{1}{2}$ million acres are dry forest land, $8\frac{1}{2}$ million acres are devoted to agriculture, and 45 millions are without much value, though partially covered with trees. When different estimates are made of this wooded surface it is due to the different meanings given to the word forest. At any rate, Finland is mainly forest land.

It is to these woods that “the land of a thousand lakes” (or, to be more nearly accurate, of ten thousand lakes) owes its great beauty. We who live in more elaborately cultivated lands can hardly form an

idea of the attraction of this forest country in Finland and Northern Scandinavia, of this beautiful mixture of pines and firs of different ages, mingled with birches and other deciduous trees; of this ground covered with rich mosses, junipers, ferns, flowers, and berries, the whole broken by lakes and rocks of fresh natural beauty. The inhabitants of a country where only regular and uniform plantations are found cannot fail to be deeply and especially impressed by such a scene, and to find this forest land, though of course its beauty varies in different parts of this large country, very grand and interesting.

While Finland as a whole is not agriculturally rich, it has some magnificent natural advantages; among others its capability of producing the trees which are most commonly used to-day for building-material. The formations found on granite do not, as a rule, make good agricultural soil, but they are an excellent encasement for the large vertical roots of the pine, and also for the long creeping roots stretched out by firs. The gravel formed by glaciation, particularly that which has been formed by brash (the Swedish "krosstensgrus") and also by rubble, is an excellent soil for pines and firs. The pine is also content with sand, marshes, and certain mosses; while the fir grows better on wet ground. The rain everywhere is sufficient in quantity for the growth of the trees, and the most valuable of them are found very far northward. There, however, their growth and multiplication is retarded, and even their shape is different. The fir, instead of assuming the shape of a pyramid with longer branches below, grows more like a column; and the pine does not attain any great height. In consequence, probably, of the hindrance encountered by its strong root as it strikes vertically downwards,

the tree stops growing, and forms at its top a tuft of branches stretching out horizontally like those of the stone pine in Southern Europe. But even thus the tree is valuable.

If we wish to locate the great mass of the forests on the map, we find them, as is natural, on the higher ground. We cannot call Finland a mountainous country, if we thereby mean to suggest mountains of considerable height. At all events, it is only a comparatively small part of the country in the north which belongs to the mountain chain of the Scandinavian Peninsula. The greater part of the country has, however, an elevation of 1000 feet or more above the level of the sea, and it is here that we find the thickest and most valuable forests; in the north, in the west where the great plain bordering the Gulf of Bothnia is separated by some hilly country from the lakes of the interior, and finally on the heights near the Russian frontier. Not much is heard nowadays about the chains of hills in Finland, of which the geographers used to speak; there are no continuous chains, but only a succession of separate hills called "Maanselkä" or "the back of the country," which runs across the north, and then south-eastwards until it crosses the Russian frontier. The "Suomenselkä," or "the back of Finland," has the same characteristics; this line runs down from the "back of the country," from north-east to south-west, till at Sideby it reaches the Gulf of Bothnia, and there divides Ostrobothnia from Satakunta. It is also lines of separate hills, and not regular chains which run down from the Suomenselkä into the interior, and divide the great systems of lakes there; we find the Satakunnanselkä in Satakunta, the Hämeenselkä in Tavastland (or Hämeenmaa, as this district is called in Finnish), the

Savonselkä in Savolaks, and the Karjalanselkä in Carelia. A line of downs, the "Salpausselkä" or "Closing Range," which crosses the country in the south, in which the above-mentioned spurs of hills terminate, and which separates the great interior basin from the low lands of the coast, are similarly not a chain of mountains, but a curious terminal moraine, consisting of sand and gravel, and with another similar spur at a distance of a few miles. The same is the case with the Lohjanselkä, which runs down from this range to the south-western coast at Hangö. These and other ranges of hills are natural forest soil. The largest and densest groups of forests are, as we have said, situated in the north, in the west inside the great plain, and on the eastern frontier; at which three points, too, the great Crown forests are to be found. But, in fact, the whole comparatively high and thinly-populated country which divides the Ostrobothnian rivers from those running south into the Gulf of Finland, has been, and still is, the home of the woods. The forests which crown the hills run down to the coasts in the south-west; and the islands themselves are well-wooded, though rocky, and contain trees of considerable value.

The common pine (*Pinus sylvestris*), the Norwegian pine or red wood, as it is sometimes called, is commercially the most valuable of all northern trees. Its wood, being resinous, is strong and durable, and it is also elastic and comparatively free from knots. The tree is called "fura" when the stems have formed into the beautiful straight column which is the usual result of dense growth, the branches then falling off cleanly without leaving knots. Otherwise "tall" is the common Swedish name. The pine grows far up in the Lapmark, but in the farthest north it looks

more like a bush than a tree. It grows but slowly there. In Southern Finland, in moderately rich soil, a pine takes eighty-two years to attain a diameter of 20 centimetres at a height of 7 metres, while in Central Finland it takes 105 years, and in the north below the Lapmark 131 years to reach the same size. A larger trunk of 25 centimetres, such as would be required at the saw-mills, takes respectively 111, 142, and 175 years in the above-mentioned three parts of the country. The height of a tree 100 years old is in these three regions 25, 21, and 18 metres; or, in the best possible soil, 33, 27, and 19 metres; or, in the least fertile soil, 18, 15, and 9 metres. The difference is thus very great. While it pays in the south to let a forest grow for 120 years, it may be profitable farther north to let it remain for 150 or 200 years; and in the farthest north no time seems to be sufficient for the regrowth of a forest which has once been cut down. The most valuable boards and planks, of from 9 to 12 English inches, require a tree-trunk measuring at least 10 English inches or 27 centimetres at the thin end. Wood of this measurement is worth two or three times more per cubic foot than when it is cut down in trunks of 18 centimetres. In the far north, on the other side of the watershed, in the Lake Enare district of the Lapmark, it has taken as much as 282 to 392 years before a pine has obtained a thickness of 25 centimetres at a height respectively of 4 and 6 metres.

The fir (*Abies excelsa*) or Norwegian spruce is generally less valuable than the pine; in its ordinary dimensions it is worth on the average 20 per cent. less than the latter. But the demand for it has increased considerably; in particular, the extensive modern requirement of white wood for paper-pulp and

pasteboard can be met by such trees of rather smaller dimensions. The fir wants a better soil than the pine, and especially it wants more moisture; but it increases more rapidly both in quantity and in value. In 100 years, in forests of ordinary density, a fir-tree reaches an average height of $25\frac{1}{2}$ metres, or 30 metres in 160 years. It can rarely grow as old as the pine without being spoilt, the limit in Finland being from 130 to 160 years. In Russia it grows a little farther north than the pine; but in Finland not quite so far north; reaching hardly to $69\frac{1}{2}^{\circ}$ of latitude, while the pine is not far from 70° . The fir, too, requires a longer time to develop in the north; a trunk of 20 centimetres at a height of 7 metres requires 162 years between the 65° and 67° of latitude; while in Central Finland it requires 123 years, and in Southern Finland 96 years. A trunk of 25 centimetres requires respectively in these districts 202, 153, and 115 years. The finest growth and the best result is obtained by a mixture of the pine, which requires light, and the fir, which is able to grow in the shade. It is in the north, in woods thus arranged, that we most often meet with the long healthy pines, as straight as the most perfect columns, such as are rarely seen in Central Europe. The fir helps to keep the soil moist. It is here too that good layers of humus are found, and that the richest growths of bacteria, mosses, and animalculæ which form good soil are developed. It is a mistake not to assist, when possible, the formation and preservation of this useful admixture.

Among deciduous trees the birch predominates. In Finland as elsewhere, in the United States for instance, the cutting down of the forests is causing birch trees and other less valuable hardwood trees to replace the resinous trees. The latter, and especially the fir,

return when the forest is let alone. The birch is found nearly everywhere in Finland, even quite far north; farthest north of all being found the little dwarf birch (*Betula nana*), which grows higher up in the mountains than the pine or fir. The peculiarly beautiful weeping birch predominates in a large part of the islands, and is also common in the southern and central parts of the country. In addition to being employed as firewood, birch is used for the manufacture of bobbins, now rather an important industry.

Of the two varieties of alder, the common red alder (*Alnus glutinosa*) grows largely among the swamps of the south, and far up along the rivers and coast. The hoary and wavy-leafed species (*Alnus incana*) predominates in the north, chiefly in central and eastern Finland, where, on burnt-over lands, it is sometimes more prevalent than the birch.

The aspen is found almost as far north as the birch, but rarely in any dense growth. Latterly its wood has been in especial request in match factories.

Among other trees the mountain ash, which in olden times was regarded even more than the birch as a holy tree, extends far up north. Among several service trees, one is known as the Lapland variety. Two other varieties, the bastard service and the Scandia service, are found only in the south-west, especially in Åland. Still farther north, we find a number of willows, including the cracking willow, and about twenty varieties of osiers. The most northerly limit of linden (*Tilia ulmifolia*) and hazel is comparatively far down, and for elm, Norwegian maple (*Acer platanoides*), and ash, it is even farther down on the southern coast. We find oak on the southern coast only, *e.g.*, on Runsa island near Åbo, and farther down on the south-western coast, and in the province of Viborg. Interesting experiments are

being made in sowing and planting the larch, which grows very far north, and of which an interesting plantation was formed in the first part of the eighteenth century by the Russian Marine Administration in the parish of Nykyrka, in the south-eastern corner of Finland. Experiments are now being made with the Weymouth pine, silver fir, white fir, "Balm of Gilead" or balsam fir, *Pinus strobus*, *Pinus cembra*, and the Douglas spruce from the North American Pacific coast. Yet other trees and bushes are found in the north, the Guelder Rose or viburnum, one of the buckthorns, the brackwood and others. In the south-western corner of the country, especially on the islands, a richer and more varied vegetation is found, buckthorns and blackthorns, hawthorns, lime-trees, bird-cherries, crab-apples, yews, honeysuckle, a few sloes, and a number of roses. In the gardens we meet several kinds of poplars (including the abele tree or white poplar and the balsam poplar), horse-chestnuts, lilacs, spiræas, snowberries, barberries, apples, cherries and smaller fruits, among which the black currant, gooseberry and raspberry extend comparatively far northwards. Some of the most perfect rose gardens are found in this northern country.

In the woods of Finland and on its moors and marshes, as well as in Sweden and Norway, we find a large abundance of berries—strawberries, raspberries, bilberries, whortleberries, cranberries, and the excellent cloudberries (*Rubus chamæmorus*), and roebuck berries (*Rubus arcticus*). The peasants and cottiers frequently used to pay, and even still pay, part of their rent in berries. Fruit in the south is sweeter, in the north more aromatic. In the United States, all these berries, especially the large variety of cranberries, bring in millions of dollars to those who cultivate and pick

them. In New Jersey and Wisconsin the cranberry marshes are sometimes cultivated; that is to say, provided with a layer of sand, and kept under water during certain periods to protect them against frost. Considering the whole fruit trade, and especially the tinned fruit trade of the United States, we cannot but wonder whether this great abundance of berries in Northern Europe might not be dealt with in the same manner, and not as now be left to bring in merely a few thousand marks. To make such an industry succeed it would probably be necessary to remove the duty on tin and tin-dipped iron for boxes, and to allow the free import of sugar, or at least to pay the duty back in the case of exports.

Nothing in Finland is more noticeable to the foreigner than the waste of timber. Not long ago in Northern Tavastland, and still later in Carelia, it was thought good policy to burn the old pine woods simply in order that they might be changed to pasture land or into plantations of deciduous trees, which later could be used in the so-called "svedja" agriculture. Rather than lose the skin of a squirrel a hunter would without hesitation fell the finest tree. Even to-day an incredible waste goes on, trees being felled for the construction of fences which, as in Sweden, are formed of slanting posts; and yet more are felled for firewood. The great mass of wood in Finland is used at home, only a comparatively small part being exported. Out of 19 million cubic metres, the minimum yearly crop, more than 13 million metres is so consumed, besides what the cottagers use in the government forests, and in addition to more than 2 million cubic metres used in factories, and on railways and steamers. Some improvement is, however, visible; in especial the idea of a necessary consumption has been changed, and it

is characteristic to notice how calculations vary in different places. In the east, in the provinces of Kuopio and St. Michel, the necessary quantity per head is reckoned at ten cubic metres, while in the south-west it is only six. On a peasant farm in the comparatively advanced province of Nyland, it is still reckoned necessary to use 123 cubic metres per annum, while for a town house 14 is considered sufficient. In the interior of Vasa the amount is 190 cubic metres, and in the coast district only 64 per farm. Notwithstanding many improvements, such as better-made ovens and so on, waste is still the rule, and we find the same thing in all countries where timber is plentiful and its value small.

The old agricultural method of which we have spoken, which obtains a few harvests and some pasture afterwards by burning over the forest lands, was certainly false economy. In a large part of the country this method has entirely changed the character of the forests. This is the case in the old district of Savolaks, that is in the existing provinces of St. Michel and Southern Kuopio, and also in other parts of the country. Instead of dense pine woods we find woods of birch with a few pines, and more aspen trees, and the wavy-leaved alder. It is not till the birch-trees are thirty or forty years old that the woods begin to grow thin, and are open enough to leave room for a new growth of fir and pine, especially fir. The aspen leaves sufficient room when it is twenty years old, the alder not till it is eighty or a hundred. Usually, however, where this burning has prevailed, the deciduous forest has not been allowed to attain such an age. It may be right for the Legislature to take up the matter and try to abolish this old and evil practice, as it has done by the law of 1886, already referred to, which

forbade all burning on rock, on very stony land, and on sands covered by pine or heath. We doubt, however, the wisdom of the clause which forbids such cultivators to take more than two harvests of grain, and lays down a rule that deciduous woods must not be burnt again for thirty years, or resinous woods for forty years. We think still worse of the proposal of the late committee, that resinous forest should not be burned over at all for the future, and of the clause in the present forest law which forbids even the waste left after timber-felling to be burnt over for the purpose of sowing grain, unless the land is immediately afterwards used for pasture or replanted as forest. We can better understand the committee's desire to forbid the burning of all heath land. But the burning of waste and dry mosses left after the old trees have been felled may be most desirable. On dry soil and dry moss it may be difficult to make the seeds of the trees sprout, or to preserve the young growth, while on the other hand it may be very profitable to take several rich harvests without burning the soil itself, and afterwards to obtain some good pasturage. In a country like Finland there is always an abundance of miserable old pasture land, often covered with ling and heath, where good forests may be produced at very small cost. The soil is firm and moist enough to allow the seed to sprout and the young growth to thrive. The old svedja is wasteful and antiquated, but burning may, on the other hand, be of excellent service in forestry, and it ought not to be forbidden. It is worthy of note that the restrictions are not always regarded, an inevitable result of legislative interference with free popular transaction of business.

The manufacture of tar, in the old fashion, is no less antiquated and wasteful than the svedja. Enor-

mous tracts of pine-wood, especially in Uleåborg and in the interior of Vasa, have been destroyed or changed into fir-woods because the pines have been cut down when they are from forty to eighty years old and used for burning tar. This has been an important business in Ostrobothnia since the sixteenth century. For several successive years the trees are stripped of their bark, except one small strip just big enough to keep the tree alive, which is left on the north side. The last year this too is taken off, and the trees are felled, cut up, and then charred in a pit or kiln in which the tar is collected. Better kilns are now used, though not so widely as in Russia, and to some extent the tar-burners make use of less extravagant material, such as stumps, roots, waste from the saw-mills, and young trees cut down when the forest-growth is thinned; the latter being indeed material for which it would be difficult to find any other use. Most of the tar, however, is produced by the old wasteful methods; tar-burning to-day still consumes some 300,000 cubic metres of wood and not less than 700,000 stems per annum; and it is still the main business of the people on the other side of Lake Uleå. It is, however, no matter for regret that the export of tar in the nineteenth century, particularly in its last decade, should have diminished considerably. There is less use for it now that wooden ships have been replaced by ships of iron and steel. When the production of tar was at its height in 1863, after having stopped almost entirely during the Crimean War, the amount was not far short of 300,000 hectolitres per annum; in 1875 it was a little over 200,000 hectolitres, and its value was 3 million marks; now the production is not much more than 100,000 hectolitres. Besides the tar itself this industry results in some minor products, such as

pitch, lampblack, and charcoal, and, with modern appliances, yet others such as methylated spirit, wood-oil, and acid-chalk. The production of potash is less than formerly. Doubtless considerable improvement is possible.

The chief products of the forest now go through the saw-mills. In 1889 about 373,000 cubic metres of planks were exported, the value being about 16 million marks; also 850,000 cubic metres of battens of the value of 32 million marks; one million cubic metres of boards of the value of 31 million marks; a little over 300,000 cubic metres of staves, bottoms, and ends of planks; boards of the value of 3 million marks; and a smaller amount of sawn spars. The total value was about 82 million marks.

The exportation of hewn spars or beams in 1899 was valued at 2,134,000 marks; of laths and lath-work at 1,380,000 marks; of round spars, bowsprits, yards, masts, &c., at 1,863,000 marks; the whole of this class of ware representing about 300,000 cubic metres and 5 million marks. Pit-props were exported to the value of about 3 millions; and wood for pulp-mills and paper factories to the value of about $2\frac{1}{2}$ millions; making altogether about 750,000 cubic metres and $5\frac{1}{2}$ million marks. About 500,000 cubic metres of firewood, both fir and pine, worth about $1\frac{3}{4}$ million marks, was exported; and firewood of other trees in rather less quantity but of about the same value. Squares of birch for bobbins were exported to the value of 250,000 marks, and bobbins themselves to the value of 2 millions. Besides these a considerable list might be compiled of other more or less important articles, such as poles, rafters, beams, knees of fir for keels, other items for shipbuilding, and various other manufactured articles. The value of the whole bulk of wood hewn or manufactured in the saw-mills

amounted in 1899 to the large sum of 101 million marks. To this may be added the export of pulp, pasteboard, and paper, representing about 300,000 cubic metres of wood and a value of 18 million marks. To this purpose a great mass of the wood of the United States and other countries is nowadays applied, in consequence of the rapidly increasing production of newspapers. No industry is better suited to Finland, Sweden, and Norway, with their great fir-woods and excellent water-power. But the production of wood so used is very little compared with the domestic consumption, and it is a small part of the wood exported. The whole of the exported wood (about 4 million cubic metres) does not amount to much more than one-fourth of the wood consumed in the country, which is about 15 million cubic metres.

The great export of timber is a comparatively new business. Formerly it was sawn by hand, or by water-power if it could be found, and the manufactured product was conveyed to the ports, usually by cart and horse, at great cost. Not until after the Crimean War was steam power allowed at the saw-mills, and it then became the practice to build mills at the mouths of big rivers, so that great quantities of wood might be floated there and work be done on a large scale. In 1861 the regulation was rescinded which, partly for the preservation of the forests, had restricted the territory from which each saw-mill might buy wood, and also the number of trunks and logs which it might saw each year. In 1846 the total value of exported lumber was 2,200,000 marks, which represented a quarter of the total exports of that time; and three-quarters of this came from the saw-mills. In 1856 this total was increased to 5½ millions, representing one-third of the total export; and of this amount

17-20ths was manufactured in the saw-mills. The greatest progress took place after the Franco-German War, when the large demand for wood in these speculative times—the “milliard period”—led foreigners to place a considerable amount of capital in the lumber business, and when large saw-mills were built on the rivers. In the five years from 1875-79 the export increased till it was one-half larger than in the preceding five years. In 1877 it was three times as large as in 1870. It decreased during the Russo-Turkish War, but in 1880 it was larger than it had ever been. These periods do not exactly follow the economic movements of the world. With wood, as with iron, a demand continues after the period of prosperity, on account of buildings begun and contracts made during this period, although the periodic reaction in the level of prices has begun. It takes also a long time, sometimes as much as four years, for the felled trees to come, first, out of the forests into the interior lakes and rivers, then to the saw-mills, and finally thence into foreign countries. The large recent increase in the value of this export, an increase from 50,000,000 marks in the prosperous year of 1876 and 40,500,000 as late as 1892 to 101,000,000 in 1899, is largely the result of the general economic development of the world, and of the greater demand which has increased the price. But it has only been made possible by the Finlanders' ability to produce. It is an advance which will continue, even though a reaction may take place at certain periods. In quantity, timber from the saw-mills has increased from less than half a million cubic metres per annum in 1865-69, to more than a million per annum in the period 1875-84, 1½ million in 1894, and more than 2½ millions in 1899-1900.

Private owners, it must be confessed, are in the habit of destroying their woods. In Finland private landlords own about 24 million acres of dry forest soil, and 4½ million acres of wooded marsh land. These figures represent respectively 44 per cent. and 8 per cent. of the whole area of land held as private property; the rest being 5 per cent. of plough land, 10½ per cent. of pasturage, and 32 per cent. of barren marshes and rocks. In all countries the great virginal forests are cut down as soon as they become valuable; in the United States, for instance, enormous natural forests have very quickly disappeared. In the northern portion of the east, especially in the State of Maine, most of which is forest land, there is now hardly any wood except the second growth. Also in the other large forest-tracts of Weymouth pine, at the western end of the Great Lakes, the virginal forest is nearly all cut down. The same will soon be the case with the Douglas spruce in the northern part of the Pacific coast, as well as the pitch-pine and other valuable woods in the forest area of the Southern States, this latter being the largest area of untouched forest in existence in the United States. Only in Canada will a large area of woods remain for some time longer untouched. In the forests of the Scandinavian Peninsula, too, especially in Norway, the trees have now been thinned out in the most serious manner; and even on the coast of Northern Sweden the large trunks have been taken away. In Finland it is not only the very big trunks which are used directly transport becomes possible; the small ones too are utilised. In 1887 less than thirty trunks were required to produce manufactured wood which should fill a standard of St. Petersburg measure; but in 1897 it took forty-two trunks. In the interior all stems of

20 centimetres in diameter at a height of 5 metres are cut down ; on the coast and near the railway 15 centimetres is considered a proper diameter. Buyers soon get used to smaller dimensions, and will now, for instance, accept a plank 3 inches by $2\frac{1}{2}$ inches, English measure, because two such planks can be used where formerly one of 6 inches by $2\frac{1}{2}$ inches was necessary. The export of pit-props or mining lumber and wood for the manufacture of pulp and pasteboard, is new ; in 1885 such exports only reached 8600 cubic metres in quantity and a value of less than 200,000 marks, while in 1900 the quantity was about a million cubic metres and the value 6 million marks.

The peasant proprietors especially are said to sell their timber as soon as possible. And why should they not do so when it is more profitable for them to have the money ? Without the money obtained in recent years for timber the remarkable agricultural progress which we have described could not have taken place. All men have not employed their money equally well ; but this is the case with the owners of most other capital and income. Complaints are made, particularly of the poorer peasants, that they are too willing to sell their woods at a low price ; but for them capital is of even more importance. The woods are best managed in those districts where agriculture is most advanced and where wood has most value, such as Nyland, Finland proper, even Åland, and part of Tavastland, which is still comparatively rich in timber. In truth, the best forests are found where the widely scattered woods and old trees, which latter are mostly damaged, have been once or twice cleared away. From the point of view of their own interest the peasants in Finland and the Scandinavian Peninsula show no little intelligence in the

management of their timber. Often enough they understand better than their superiors how to make a profit out of it.

The committee appointed to inquire into the state of the forests has several times recommended that a small duty should be imposed on exports of small sizes of wood such as mining timber or of wood for the manufacture of pulp and pasteboard. It was proposed that 10 per cent. should be paid, which for wood of this kind at its ordinary value would work out at about 15 penni per cubic metre. The large lumber which has not passed through the saw-mills pays now 45 penni per cubic metre, or about 5 per cent. on the value of the unfelled timber, and the saw-mills pay a duty which is estimated to amount to the same. Instead of imposing such a new duty, which the late Forest Committee has also recommended, it would be better to abolish all duties on the exports, including that on manufactured goods from the saw-mills. The more money made by timber the greater is the encouragement to preserve and cultivate the forests. This is good logic, and any duty which decreases value is evidently wrong.

The enclosure and distribution of what were once the common forests, first among parishes and villages, and then among single proprietors, has contributed, as a rule, to increase the interest of these persons in their forests. It is only natural that, when enclosure has been decided upon, the peasants should sometimes indulge in a little license before the enclosure takes place. The law of 1886 tried to prohibit sales during the process of enclosure, and even authorised the provincial governors to regulate the use of the forest by the peasants during such periods. Sometimes the allotment of a distant piece of land has been a reason

for the peasants to sell their forest property as rapidly as possible.

A large extent of woods, about 100,000 acres in all, is owned by some towns, especially in the north and east. Recently it has been thought advisable to preserve forests held in common ownership by parishes, villages, or other societies. Such common woods may be retained by the village at the time of the enclosure, or the government may grant this forest territory to the peasants for a reasonable rent or price. The provincial Governor has to approve the plan for the utilisation of the forests, after hearing what the department of the State forests has to say. The late committee recommended that when a decision had to be taken about preserving half of the forest for the village, unanimity should not be essential, but only a two-thirds majority be required. The fact is, however, that the peasants are not greatly concerned about common property; they do not agree with their theory-loving friends. Up to the present time they have not made much use of the legislation on the subject.

In theory it may be right to prevent the abuse of their own property by people who do not know what is good for them; and there may not, therefore, be any abstract objection to a repetition in the Forest Law of 1886 of the old Swedish law forbidding peasants or owners to destroy their forests, and compelling them, if they do not use the soil in any other way, to leave some trees for seed, and otherwise attend to the regeneration of the forest. The committee which has inquired into the situation of the private forests recommends that, in order to supervise the woods better, men proposed by the parish should be nominated by the Governor to form committees of super-

vision for this purpose. We doubt whether proprietors would like such supervision by their neighbours.

It is a matter for congratulation that the Finnish legislators have not adopted the clauses of certain new Swedish laws passed for the Island of Gotland and the north coast of Sweden, which forbid the exportation of wood of small size. The best forestry demands the thinning as well as the cutting-down of shut-in, badly-developed trees. To fell the trees over an entire area is not considered good policy; but we must repeat that it is bad economy to leave badly-grown, stunted trees. Yet to make the business pay requires good management in the felling, transport, and sale of the trees, and this is often best obtained when the work is done on a large scale. Frequently it is necessary to construct roads, lay down rails and use light movable tramways, which are a serious affair for the small proprietor, and it is doubtful whether the committee is right in trying to stop exploitation on a large scale. At all events it seems a mistake thus to restrict private enterprise. The Finlanders are perhaps less hostile to the intervention of middlemen than certain other more prejudiced nations, but even they complain of the middlemen buying forest lots to re-sell to third parties. They hardly sufficiently realise the benefits of commerce, or understand that it is only trade which gives value to the forests. It is not sufficient for the forest to exist; the owners must know how to sell it, to collect the scattered material, and to take advantage of the movements of the market.

In Finland, as in Sweden, the purchase and tenure of forests and forest property by joint-stock companies has been spoken of as a danger. In the Swedish provinces of North and West Botten such companies are said to hold respectively 21 and 13 per cent. of

the land. In Finland the amount is not so much, but there, too, they have acquired about 2000 farms. Sometimes they only work the forests and sell the farms; sometimes they retain and sublet the farms or grow hay on the land. As a rule, such companies treat their woods better than the peasants, often managing them according to the most scientific methods of forestry; and it may be stated, as a general rule, that forestry is one of those rare kinds of business which can be worked better by a large proprietor than a small one. Now, most of the large properties, which, as we have seen, are not very numerous, are found in the well-cultivated parts of Finland, not especially in the forest country. Here, in the north, in Kuopio, Eastern Vasa, and Northern Tavastehus, is the part where the companies have bought land; in one part of Kuopio they have bought a whole small village. A company usually has the capital which is necessary for the long business of bringing down the lumber, and also for enabling the vendor to wait for the best market. We will not here lay stress on the democratic nature of the joint-stock company; its shares are the means by which the people can take part in the acquisition and holding of land. But even if the forest property is bought with the intention of felling the whole forest and perhaps selling the land, this may be just the right thing to do, for many public and private reasons. We have spoken, too, about the participation of foreigners in forming these companies, and thereby acquiring land; to get foreign capital into the country is a well-appreciated advantage. If the peasants sell their farms to the companies and themselves prefer to be tenant-farmers or even carters and timber-floaters under the company, they do it, as a rule, because it is more advantageous for all parties.

The power to register a contract about the sale of timber only, and not land, with the right of mortgage, is a step in advance; there is thus no need to sell the land too, where such a sale is not desirable, but only to obtain security for the mortgage.

Misfortunes such as forest fires and destructive winds occur after the felling of the timber. A dried-up waste easily takes fire and burns freely; also it is overrun by insects, and the clearance of the trees gives access to the wind. Fire is certainly the worst evil. It is a question, however, whether fires increase with cultivation. In the United States, in Illinois and Southern Wisconsin, for instance, we have seen large tracts of country becoming gradually covered with trees because the prairie fires no longer overrun the country every autumn as in the time of the Indians, destroying young seedlings everywhere except on the wet borders of lakes and rivers. In Finland in former times fires were very frequent on account of acts of negligence in lighting fires, and even more on account of the burning-over of the land, which has thus destroyed a far greater part of the forest than was intended. As a rule, in spite of the risks attendant on the lumber-man's work, fires are much less numerous and destructive than formerly, though they are still a great danger. Our readers must have seen a forest fire to understand what it really is. It resembles to some extent a heath or prairie fire, running over the soil and killing, though not always entirely destroying, a large number of trees; only some of the older pine-trees being able to withstand it. In Finland particularly, fires have destroyed dense forests of pine and fir over large tracts of country, changing them into woods of less valuable deciduous trees; though in some cases the burnt forest was rapidly replaced by young

resinous trees. Terribly destructive winds also were experienced in 1866, 1873, 1890, and 1897. The gale of 1890 enabled the peasants in parts of Southern Finland to get a good supply of wood with which to build themselves houses.

Fortunately the law in Finland has not forbidden grazing in the woods. This would have been an unpractical restriction, impossible to maintain. Cattle-grazing is also a considerable aid in the reproduction of the forest. From the far north come complaints of the reindeer interfering with young plants by their trampling, and destroying great quantities of young trees by scraping them with their horns. Here, too, a certain amount of grazing is helpful to the growing trees in places where there is an abundance of reindeer lichen; but hard grazing dries up the soil, to the great detriment even of the older trees. Hundreds of thousands of spruce are felled to obtain lichen during the winter when there is not enough on the ground; special men are engaged on this work; but it is no great loss, because they only cut down the unhealthy valueless trees on the marshes. In some northern districts an extravagant number of trees are cut down to obtain small fir branches to place under the cattle. Millions of cart-loads of moss are taken away for the same purpose, or to fill up joints in wooden buildings, but this does not hurt the forest. We hear sometimes of damage done by pigs to the growing woods near the villages; but every one knows that it is especially the pasturage of sheep and horses which does harm to the young plants. And as complaints about the sheep have only come as yet from the island of Åland, we realise that the Finlanders are not very far advanced in the science of forestry.

The province of Uleåborg, which forms the northern part of the country, contains about half of all the land in Finland. Even up here there are great stretches of well-cultivated land near the coast; and on the sandy sub-soil which we meet here in one part of the country, we find the celebrated prairies of Limingo. But in the east of this same district of Uleå, which extends from the Gulf of Bothnia to the Russian frontier, we find in the parish of Kuusamo an immense forest which even now has not been fully explored. At the enclosure, communal land here to the extent of 82,000 acres was reserved for two parishes. In the interior, in the district of Kajana, people have lived, and still largely live, by burning tar in the forest. We may well be astonished, however, to learn that in this part of the country, with its immense tracts of woods, there are continual complaints about a lack of timber. We do not refer only to the buildings on the coast, where, as in Iceland, dwelling-houses are made of turf because there is so little timber; it is from parishes where the peasants hold some 5000 acres of forest each, from Upper Torneå, for instance, that complaints come of a lack of wood, with the result that the government has granted each man from 1200 to 2500 acres of Crown forest. A good many of the peasants have met this liberal treatment by an immediate sale of all their heavy timber, the contract being usually that a loan is granted without interest, which they must repay by delivering wood. In certain parishes with large forests the peasants, owing to their bad economy, have now nothing to sell from the woods except the osier bark. The destruction of the forests began in this part of the country and continued in the Lapmark, on the only land there which, so far, has been divided

between the Crown and the parish authorities. Destruction of the forest in these parts is so much the more dangerous because regeneration is extremely slow and difficult. In the Lapmark there are large areas of old woodland where the forests have been destroyed, and at the end of several generations show no signs of fresh growth. In this country there is indeed need for the forester's art.

Of two kinds of State interference in forest business the Finlanders have fortunately chosen State ownership, instead of interference with private ownership. As we have already pointed out, the State has from the first asserted its rights over all waste land, retaining not only the greater part of those northern territories where practically nobody lives, or only a few nomads are found with their reindeer, but also what was left after an enclosure had been made and the peasants had obtained their 750, 1200, or 2000 acres, or as much as they could readily use. It is thus that the Crown has obtained its enormous property of 35 million acres. In 1875 it amounted to $37\frac{1}{2}$ millions, but since then large areas have been given to the peasants in addition to what they got at the enclosures. There arises a question of great importance to forest cultivation, one to which we have already alluded and would now come back—whether large allotments are for the future to be granted to settlers. Lest we should seem to exaggerate the value of these Crown properties, we must explain that $31\frac{1}{4}$ out of these 35 million acres are situated in the northern province of Uleåborg, where indeed the Crown owns three-quarters of the soil. Much of the land here is entirely unproductive, even if it is not all peat-bog, marshes, or rocks. On the other hand, there is a large area well suited for forest-growth; and on the whole the

State property is exactly in those regions which are suitable for forests, and where, as already mentioned, there is only a small population. Others of these Crown lands are on the heights of the interior of Vasa and in the east of Kuopio and Viborg. Fourteen million acres of the entire total is dry forest soil, and 21 millions bogs, rocks, and water. Some of the bogs and marshes, however, produce timber, their area being reckoned in 1869 at 5 million acres. Barely $8\frac{1}{2}$ million acres of forest are located where at present they are profitable. On another 3 million acres are found young trees, or soil capable of producing valuable timber.

Not till 1850-51 was it decided to establish a proper forest administration. In earlier times officials were appointed chiefly to look after the hunting and shooting; in other respects the State property, even when finally separated from the common lands of the peasants, was managed by the regular district officials. Business such as the organisation of farms which could pay taxes was of greater public interest. Baron Edmund von Berg, the President of the renowned Forest School of Tharand in Saxony, was now summoned, and it was on his advice (which, however, was only partially followed) that an Administration for the Forests was established in 1859, with additions made in 1863. That this is not yet sufficient is due, among other causes, to the enormous size of the districts under its control, there being four districts of more than $3\frac{1}{2}$ million acres, twelve of over 250,000 acres, twenty-five of over 60,000 acres, and nine of a smaller extent. The forest guards are numerous compared to the foresters at the head of the districts, but these guards are uneducated men with a very small salary. Up to the present time little has been

done besides preserving the forests and selling the heavy timber for the benefit of the Treasury. Formerly this Crown property had been used by everybody pretty much as they pleased.

In 1863 a School of Forestry was established at Evois, but instruction here was occasionally checked by an insufficiency of pupils. Lately the school has been extended and a course of instruction in forestry has been suggested at the University of Helsingfors, it being generally admitted that advanced studies are more profitably carried on at a university than in isolated schools. A much-needed course of instruction for the forest guards has also been instituted; and it is proposed to establish a station for experimental forestry, as has been done for agriculture. Every year small grants of money are distributed through the agricultural societies for the promotion of forest cultivation, which can hardly yet be said to exist. The State foresters are allowed to assist private persons in drawing up schemes of growth and other work.

The principal question for the future will certainly be to what extent land fit for agriculture and for settlement is to be separated, as decided by recent laws, and furthermore, how much forest land shall be granted to each settler. The importance of such laws depends to a great extent on how they are applied. If the Crown forest land is to be treated as a commercial undertaking, commercial value must be the principal consideration. That ought to be the object of the million of acres which have been put aside as "Kronoparks," that is to say, for regular forest-growing. We need not speak of the Crown parks maintained for the public benefit on account of their beauty, such as those near the great waterfall of Imatra and near one of the lakes at Punkaharju.

In the seventeenth and eighteenth centuries a theory was held that the forests ought to be given up to the interest of the mines and factories. This was in accordance with the common protectionist principles of the time, according to which these mines and factories were supposed to be for the benefit of the country, even if they did not pay, but on the contrary cost more than they brought in. Now the great question is, what to do for the peasants who desire to utilise the land.

Such thoughts seem to have influenced the action of the government even when they had under consideration the question of purchasing the forests in the public interest. It was not only at the time of the general enclosure that the government acquired land. On the recommendation of the Forest Committee of 1874, land was bought during the period of 1874-95 in those parts of the country where the government thought it desirable to preserve the woods, and where ground fit for this purpose was to be had; as, for instance, in East Vasa, in South-West Åbo-Björneborg, in South-East Tavastehus, and in St. Michel. For about one million marks 170,000 acres was acquired. To this must be added 425,000 acres reserved as Crown parks when the donation estates in East and North Viborg were purchased from the Russian nobles, of which area 83,000 acres are still reserved for peasants who may desire to buy them after paying for their farms. Not only this work of purchasing forests but the whole work of separating the agricultural land from the forests, and especially the forming of Crown parks for forest cultivation, has been stopped since 1895.

To what extent ought land to be granted to settlers without payment? In the United States the best

cultivators, and those who produce the wheat and maize of the country, are not the "homesteaders" or settlers who obtain their land for nothing, and are only obliged to cultivate a small part of it for five years; it is rather the men who buy their land from these settlers or from the railway companies which, during one period, obtained large grants of land from the government. In Finland complaints, apparently well-grounded, are heard of settlers who tried to obtain land simply in order to re-sell the woods which were given to them so liberally for almost nothing. The more recent laws reserve to the Forest Administration the right to sell all full-grown timber for ten years; but such reservation is hardly sufficient. There is scarcely any opportunity, for instance, of selling scattered outlying trees. The Forest Administration is doubtless right when it recommends that these free gifts of agricultural land and large tracts of forest should be discontinued. In Sweden the government has been obliged to repurchase large areas of land from the settlers in Jämtland, who had got them for nothing, and whose rights in the forest clashed with the right of the Lapps to use the forest pastures for their reindeer. A new provincial law in Sweden has tried to check the settlers' prompt destruction of their woods, by an order that they must cut trees only under the direction of the Forest Administration. It has been proposed to imitate this proceeding in Finland, but it would be better not to give away these large tracts of forest, and so avoid subsequent interference with natural liberty. Such restrictions rarely answer; and where it is in the public interest to preserve and manage the forests it is better for the State to do the work itself. This fact is not sufficiently recognised in the matter of the settlers; their too

liberal treatment is mainly a result of modern false sentimentality. Men in authority are by no means the last among those who profess democratic views and wish to be friends of the peasants, even where their action violates common sense. In the far north it would be especially detrimental to the country to destroy what is still left of the woods. The larger part of the Lapmark forests still await division between the Crown and the peasants, but even where the work has been done it is important to guard the rights of the Crown. The Lapmark is a vast territory extending through three degrees of latitude, and hardly used for anything but reindeer pasture. The government has been recommended to keep a belt of land 32 kilometres broad on the northern edge of the forest. A division of the forest between Crown and peasants is desired here too, so that the trees may be utilised; already many are becoming valuable, and the great majority are rotting and losing their value on account of their age.

Besides the regular forest cultivation there is other work of great and probably equal importance. The draining of large or small areas, among other matters, is often extremely profitable. In 1869 it was computed that at least $1\frac{1}{4}$ million acres ought to be drained; this being often necessary simply to preserve the existing trees. If nothing is done it seems that the mosses often grow so rapidly as to kill the trees, or at least to render the soil too damp for forest cultivation. In many large districts the majority of the trees are, it appears, skeletons, that is to say, they are dead wood. Some improvement, not less radical, is needed in the system of floating off the trunks and logs. In some places it is necessary to prevent private persons from establishing

a practical monopoly in the business of floating wood, whereby they gain complete control of the woods. We shall have to refer to this matter later.

Of some interest, too, is the work done for the "boställen" or farms belonging to the Crown in the provinces, about which we have already spoken. The greater number of these, formerly occupied by officers of the old Swedish army who were supported by these lands, have since 1863 been subject to the supervision of the Forest Administration. These farms are about 800 in number with an area of 650,000 acres; they comprise also about 390,000 acres of forest and 85,000 acres of marshes. Since 1896 about fifty other State farms, comprising about 40,000 acres of woods, have also been placed under the supervision of this administration, and the case will soon be the same with the glebe land of 700 rectories and vicarages, comprising 482,000 acres of dry soil and 115,000 acres of marsh land. This supervision is in the interest of the tenants, including the pastors. Up to date only 35,000 acres have been taken from these farms to be reserved as Crown parks and forests.

On the government domains the big trees have been counted. In 1860 it was estimated that there were about nine million pines large enough to furnish big logs; that is to say, trees 25 centimetres in diameter at a height of 6 metres. In addition there were five million trees large enough for railway-sleepers, that is, trees 18 centimetres in diameter at a height of 6 metres. Later on more exact measurements were made, the result giving 26½ million first-class trees and 30 million second-class trees; and if we include the woods where the trees are not numbered, but where their bulk is approximately calculated, the total number of measured trees in the two classes are estimated

respectively at $34\frac{1}{2}$ and 45 millions. This is not much for such an enormous area, being only one first-class tree and $1\frac{1}{2}$ second-class tree per acre; even if we calculate the numbers on the dry ground alone they are only $2\frac{3}{4}$ and $3\frac{2}{5}$. Nevertheless there are large districts where we find nineteen large trees per acre. For the trees sold, the average price during the period 1861-95 has been 2 marks 14 penni per tree, or 4 marks 77 penni per cubic metre. In the richer districts the price has been 6 marks 58 penni per cubic metre. Now the price has gone up considerably, even in the far north, where it was once almost impossible to sell timber. In some districts as much as 16 marks per tree has been obtained, a price which is high even when the present price of boards and deals is allowed for, and can be explained only by the purchasers being obliged to obtain large trees in order to fulfil some foreign order. At all events, these 80 million trees represent, at present prices, a capital of more than 100 million marks. The Crown forests themselves are probably now worth 200 millions. During the years 1874-83 they furnished to the saw-mills on an average $10\frac{1}{2}$ per cent. of the logs used there, and from 1884 to 1893 14 per cent. In bulk, however, it was probably double this amount, because the trunks and logs from the Crown forests are considerably larger than those from private woods. In 1898 the value of the total amount of wood sold from the Crown forests was 2,820,000 marks; in 1899 the amount was 5,120,000 marks, and for the first six months of 1900 it was already 4,470,000 marks; 930,000 trees making a total of 390,000 cubic metres. The sale might probably be increased yet more without hurting the forests.

The present condition of these Crown forests will

be better appreciated if we remember how they were formerly treated. Over large areas of the domains the trees have been nearly all ruined, or the woods cut down to obtain resin or tar. Elsewhere the forests were burnt for the sake of two years of grain and a little subsequent pasture. Even now there is a constant succession of forest fires, mostly due to negligence and to lack of necessary organisation when the fire has to be combated. In some years the fires have been fewer, but the area destroyed in this fashion increased again during the period 1891-95 to an average of 40,000 acres per annum. We have already spoken of the increase of marshes and moss in spite of a certain amount of work already done to check them.

Theoretically the modern forest administration of Finland is perfect. In Germany, where in some respects the theory and practice of forestry is best understood and carried out, there are too often lapses from both. In some German States, especially Saxony and parts of Southern Germany, where the principles of men like Pressler, G. Heyer, Judeich, Von Pfeil, Endres and others have been adopted and well executed, we find probably the finest and best utilised forests in the world. In Prussia principles have been laid down contrary to simple logic, such as, for instance, the theory that in forest business the same interest on capital ought not to be looked for as in other industries, and in especial that we ought not to demand ordinary interest on the capital-value of the trees because they grow too slowly to produce such interest. It is said, too, that forests ought to exist for the benefit of the public without any expectation of large profit, and that it should be regarded as beneficial to the people to produce large forests even if this costs more than the woods are worth. It is unnecessary to point out

the illogical character of these so-called principles, or the practical mistake of, for instance, the idea that the yearly output ought to be regular even if it would obviously pay better to fell more trees one year and less the next. In Finland we have not noticed any such erroneous theories. As we have already said, it was from Tharand, the centre of sound scientific forestry, that the first expert advisers came to Finland, and so far as we can see the present administration fully realises the principles of sound economy. It understands, for example, the importance of felling immediately the mass of old trees which do not increase adequately every year in value, and the enormous mass which are already too old and partly spoiled, and it sees the necessity of studying the demands of the market, the chances of finding purchasers, the wish of the latter to purchase special timber from certain regions; in general, all the market fashions. The Finlanders do not, we believe, hold the bureaucratic idea that they must obtain a regular yearly output; they prefer to treat the forests in a business-like manner. There is need of energy. It is right that the government should hold and exploit a large forest property instead of legislating for private owners; it holds already a larger area than any other government in Europe, and probably it ought to increase this area by following the advice of the Forest Committee, and purchasing woods on suitable soil where they can be bought cheaply; but it ought to be able to spend on such work more than 500,000 or 750,000 marks, which till now has been its annual expenditure. Here is work as important and interesting as any task in the hands of any State in Europe; and Finland has a body of officials sufficiently honest and capable to execute it.

Next to Finland, Russia and Sweden have the

largest forests; but only one-third of their area is forest land, against half or even two-thirds in Finland. The forest area in Austria is about one-third; in Hungary it is between a quarter and a third; in Germany a quarter; in Switzerland one-fifth; and less in all other countries. In Sweden the situation most nearly resembles that of Finland, but much more rapid progress is being made there in organising the Crown woods or areas set apart for regular forest cultivation. These amount to $15\frac{1}{2}$ million acres against the $2\frac{1}{2}$ million of Finland. Only the 16 million acres of mountain territory are not yet reserved. In Russia it is estimated that the forests in three of the northern provinces cover 70 per cent. of the whole country, and in the other five northern provinces 65 per cent. Generally speaking, all the forests in Northern Russia are declared to be government property, as is all the land; but notwithstanding this condition of affairs the destruction has been much greater than in Finland. In Northern Finland the best trees are found near the rivers, the marsh land between the rivers being comparatively bare of timber. This division is even more marked in Northern Russia; near the rivers here we find belts of land from one to seven kilometres broad covered with firs, birch, aspen, and pines, the number of the latter being, however, comparatively small, while in the enormous marshes between the rivers hardly any valuable trees are found. Everywhere, including on the river banks, most of the sound timber has been felled. The forest labourers, as a rule, have been allowed to cut down trees as they please, and it is now very difficult to procure the timber required for commercial purposes. Over the whole of this enormous area there are barely 25,000,000 acres of sound forest left.

During the last few years the owners of the Finnish forests have seen their property more than double in value. The timber merchants and owners of saw-mills have probably experienced an even larger increase, and the workmen have had their large share of benefit. On the forest lands of the north they are paid American prices for their labour; three to four marks a day, or eight marks for a man with a horse. Foreign business men and capitalists—Swedes, Norwegians, and Englishmen—have taken part in this commerce, sometimes in person, sometimes as shareholders in (mostly Finnish) companies, also by purchasing logs to be floated to saw-mills on the other side of the Gulf of Bothnia. This too is to the profit of the country. It is said that the present energetic exploitation of the timber trade is eating up the capital of the future; but this is a great exaggeration. In the first place, as we have said, it is the great waste inland which causes most of the trees to be cut down prematurely, and this will grow less in time as the forest becomes more valuable. In the second place, notwithstanding this inland consumption, the annual increase of the forests, including the Crown forests, is larger than the yearly felling. This increase is variously estimated at from 2 to 2.4 cubic metres per hectare ($2\frac{1}{2}$ acres) in the south, and from .7 to .8 cubic metres in the north. The whole consumption may be $20\frac{1}{2}$ million cubic metres per annum, but the increase is certainly more than 21 millions. In Sweden, where also in former times no care was taken of the government forests, the yearly increase is estimated at 2 cubic metres per hectare; in Prussia, with its poor forest land, but where much better care has been taken of the woods, even if sound economic principles do not prevail, the increase is 2.6 cubic metres per hectare. In any case,

in Finland both increase of growth and output of timber might be greatly increased. The use of seed and planting is only beginning to be understood; and the great capacity of the country for the production of timber is only just beginning to be utilised as it ought. Wood of the most valuable dimensions has, it is true, been selected for felling, and is now being selected, but the increased means of communication, and the growing demand for smaller sizes in timber, are continually creating new values and new capital. There is an enormous opening here for private as well as public enterprise. We have been astonished to find the seeds of such great wealth in a country which has for so long been notorious for its poverty.

CHAPTER VI

MINING AND MANUFACTURING INDUSTRIES

FINLAND is not rich in minerals; at any rate no particular mineral wealth has yet been found; but although industrial life is lagging behind agriculture and the timber trade, there is every hope for the future, and in some respects there is lively progress. Manufactures closely allied to agriculture and forestry, such as creameries, saw-mills, and pulp- and paper-mills, stand very high; but most of the other manufactures exist by tariff protection. It is therefore impossible to say how far they are genuinely productive or what their final outcome will be. Excellent conditions for the development of certain industries exist, and we can only hope that they may be used aright, and that the industrial life of Finland may not be led further astray at the expense of other business and of the great body of consumers.

The substratum on which the later formations of the soil are found, and which continually appears on the surface, is granite, in its various forms as pure granite, gneiss, porphyritic granite, &c., and is not without industrial importance. It is an excellent building material, frequently of beautiful colours, light or dark grey, blue-tinted, brown, or red of the shade of raspberries or flesh. Great masses of granite have at different times been taken to St. Petersburg and used for some of the most magnificent buildings of the Imperial city. Thus it has been used for the

three rows of pillars fifty-five feet high which stand round three sides of the Cathedral of St. Isaac, and for the Marble Palace; and it was employed for the monument of Alexander I., in building the quays on the Neva and various canals, and for the ordinary pavement of the city. Finland granite was used, too, in the monument of Alexander II. in Moscow. Finland stone has gone still further afield; though the statement that the porphyry of the tomb of Napoleon came from the coast of Lake Ladoga, or from the beautiful porphyry in the island of Hogland in Finland, is incorrect; it came from the Russian government quarries in Olonetz. There ought to be a considerable demand for this granite, since very few countries in Europe have such fine masses as are found on the Scandinavian peninsula and in Finland. On the great plain of Northern Europe there is hardly any. It is, however, a product of great weight in relation to its value, and the transport is therefore unduly costly. At any rate, the production in Finland is quite small, many times less than that in Sweden, whence granite to the value of fifteen million kronor is exported every year. In 1898 the production in Finland was worth only one million marks, this amount being double what it was in 1893, when there was a slight decrease from former years. More than half of the whole production—paving-stones, large blocks, and polished stones—is exported, most of it to Russia. In 1899 the export was a little less than in preceding years, probably because building work in St. Petersburg was less than in previous years, when money was more abundant. In Finland itself, especially in Helsingfors, fine building work has been done in granite, the new Union Bank being a good specimen. On the whole, however, the production is small compared to Scotland

and parts of the United States, where there is a demand for fine material, whatever its cost. In the statistics we have not included granite buildings for agricultural purposes or those in the smaller towns. Much is expected from the recently-formed Granite Company of Hangö, which is introducing finished work in granite into Finland for the first time. The granite exported into Russia in former times came from the neighbourhood of St. Petersburg, and the material was finished there.

The beautiful marble, grey or tinged with blue or green, which comes from the coast of Lake Ladoga, is found especially at Ruskiala, where a pastor named Alopæus discovered the quarry in the middle of the eighteenth century. This marble has been used for palaces and churches in St. Petersburg. Plain limestone has been used for building from the oldest times, as when Birger Jarl during his crusade in the middle of the thirteenth century built the castle of Tavastehus. The most important kind in use at present is the burnt lime of which common mortar is made; this was produced to the value of 700,000 marks in 1898, as against one-third of this amount in 1893, and two-thirds in 1891, which was a better year. The export of limestone and mortar in 1899 was barely worth 200,000 marks. Even the most common building materials have to pay duty when imported into Russia. Burnt chalk is used with peat for agricultural purposes. Cement is used in some cement foundries, but is not made in Finland.

The manufacture of bricks and tiles rose in 1898 to a value of 4 million marks, against 700,000 in 1893 and one million in 1895; a fact which helps to show the activity of recent years.

In the manufacture of china and earthenware,

especially of the tiles of which the excellent tiled stoves of Sweden and Finland are made, imported material is used. The largest factory is the Arabia Works of Helsingfors, where the output in 1899 was 2,200,000 marks against one million in 1893. There is a small export to Russia of a few hundred thousand marks' value, hampered by an import duty of 7 marks 32 penni per 100 kilo, imposed in 1887; and even with this the amount of importation is limited to 30,000 poods or 491 tons. We mention these details here and elsewhere, because they are necessary in order to understand the industrial relations of Russia and Finland. On the other hand, the production in Finland is protected by high duties.

The manufacture of glass has developed fast, notwithstanding the necessity for importing the raw material. In 1898 glass was produced to the value of 4 million marks, against 3 millions in 1894. The largest manufactory is that belonging to a Russian Company with factories at Rokkala in the province of Viborg, and Utra in Kuopio. Most of the output, about 3 million marks' worth in 1898, but only 2½ millions in 1899, was exported to Russia, this comprising about a million bottles, some window glass, and other kinds of glass. In this case, too, the import is hampered by a duty which was increased in 1897 to 1 mark 22 penni per kilo. As a result of this, several kinds of exports have decreased in amount, while others have grown.

In 1867 the Norwegian State mining expert, T. Dahll, found gold in the affluents of the great Tana River, which flows into the Arctic Sea and separates Finland from Norway. Finnish experts also examined the country, and two seamen who had washed gold in California went up and worked on the Ivalojoiki in

the Enare Lapmark. The output of gold has not, however, attained any great importance; during recent years its value has hardly reached 15,000 marks per annum. Some small nuggets have been found whose rough exterior shows that they cannot be far from the main reef; and a piece of rock has been examined by some experts who, for various reasons, believe that it may contain gold. The most recent reports say that work there has been successfully begun by a man returned from Klondyke.

Copper ore is found in several places. Formerly it was extracted from the Orijärvi mine in the well-known Fiskars Works in South-West Finland. Copper has also been found in the parish of Kuusamo in the North-East, but not in sufficient quantities to warrant the beginning of regular mining. At present it is only at Pitkäranta in the South-East that the Russian Alexandroffski Company extracts copper, which they treat by the wet process. In 1899 they extracted only 224 tons, of the value of 600,000 marks, together with a very small amount of silver and tin. These works have special permission to import into Russia 40,000 poods, or 655 tons of copper and tin.

Iron plays a not unimportant part in the history of Finland from the oldest times, its extraction being at first carried out in a very primitive way. Energetic men have repeatedly taken up the work, bringing to it the newest methods of each period. Its history presents a picture of varying shades, not always bright, and we must admit that even now we have great doubts about the future of this interesting industry. A visit of Gustavus Adolphus to Finland in 1614-16 was the occasion of renewed efforts and of a certain amount of success. The great war with Peter the Great destroyed everything, but when the war was

over the iron-works were re-established. In the nineteenth century, after the separation of Finland from Sweden, the Swedish government forbade the export of ore to Finland, and later only permitted the export of a limited quantity, till in 1860 a more liberal period began and restrictions were abolished; nevertheless, during this time a number of blast-furnaces were established. Now that Swedish ore can be imported freely, it is only in Eastern Finland that it pays to use Finnish ore, this latter being partly taken from the lakes, where it is being deposited by nature, partly from the hills, and a little of the less valuable kind from the morasses; such bog-ore having formerly been used in other countries also. In 1889 Russian firms began to extract it from the hill country near Vålímäki on Lake Ladoga, and in 1896 at the Pitkäranta copper mines. In 1899 some 8300 tons were extracted at Vålímäki, besides 4500 tons from the moors. Most of the ore there, which is not at first rich enough to pay for transport, is ground and treated by a new electro-magnetic process, whose only drawback is that it produces dust which is poisonous to the workmen. At Pitkäranta 10,000 tons are extracted yearly and treated by the wet process. The whole mass, 24,000 tons, was formerly taken across the lake into Russia; it is only recently that part of the ore was treated at Pitkäranta. In 1899 some 17,000 tons of ore were imported from Sweden into Western Finland. At Jussarö, experiments connected with the great name of the late Baron Nordenskjöld have been undertaken in regard to the extraction of ore below the sea; it is an old mining enterprise renewed, but probably will not succeed, as the ore is not rich. In 1899 the ore from the lakes and moors

showed an output of 56,000 tons, this being less than in some former years, and 50 per cent. less than in 1875. It contains on an average scarcely 36 per cent. of iron, while the imported ore contains about 52 per cent.

The production of pig-iron in Finland is carried on in fifteen blast-furnaces, eleven in Eastern and four in Western Finland, one in the East (St. Annæ) belonging to the Russian government, and two others to the great Companies of Värtsilä and Varkaus. It amounted in 1898 and 1899 to about 27,000 tons, and is inclined to decrease; in 1897 it was 33,000 tons. The import in 1898 and 1899 was the same, some 22,000 tons. The export to Russia in 1899 was 11,000 tons, a decrease on the 12,898 tons exported in 1898, and 14,500 exported in 1897. In Russia a duty is imposed on all foreign pig-iron; and in 1897 one was placed on pig-iron coming from Finland too, with the exception of $1\frac{1}{2}$ million poods (24,570 tons) produced from Finnish ore. If we deduct this export we find that the internal production consumed in the country was about 16,000 tons per annum in 1898 and 1899. The ore, like other raw material, does not pay any duty in Finland, but pig-iron has to pay a duty of 1 mark 20 penni per 100 kilo. As the price is determined by the price of the imports when these are needed to supplement the home productions, we find here already an increase of 10 per cent. in the value of imported raw material, 133,000 marks for the whole amount of $1\frac{1}{2}$ million marks.

The treatment of iron in open furnaces, known as Franche-Comté and Lancashire furnaces, is decreasing; in 1899 at fourteen works there was still an output of about 3000 tons, worth one million marks. Larger

amounts are now treated by puddling; in 1899 there were thirty iron-works belonging to six companies, using 15,000 tons of pig-iron, which yielded 13,000 tons of mill-bars and smelted iron, this being double the amount of 1877. Of this output 11,000 tons were treated in nine rolling-mills and produced 9000 tons. Yet more is smelted at five iron-works in the new Siemens-Martin furnaces; the amount of this in 1899 being 16,000 tons of pig-iron, which produced an output of 15,000 tons against only 3000 six years ago. Of this output 13,000 tons were rolled, but only a small portion into plates. The total mass of iron treated was 27,000 tons; the output of the rolling-mills amounting in 1899 to $2\frac{1}{2}$ million marks, and of the smelting works to $3\frac{1}{2}$ million marks. Here, too, the value is evidently fixed by the imports, which in 1899 amounted to 13,500 tons of billets and bars of the value of 2,300,000 marks; 7759 tons of plates of the value of about $2\frac{1}{2}$ million marks; 1600 tons of tubes, and 632 tons of fine iron of the value of about half a million marks. Both the bulk and the value were a little higher in 1898. On most of this there is an import duty of 6 marks 50 penni per 100 kilo; and the consequent increase of price to the detriment of the consumers, among these many of the manufacturers, is probably not far short of $1\frac{1}{2}$ million marks, or a quarter of the whole value. Besides these amounts, 27,000 tons of rails were imported duty-free in 1898, and 24,000 tons in 1899. Some export of iron goods took place into Russia, where, too, in 1885 and 1897, a duty was imposed and increased. In 1885 it was only 36 marks 60 penni per ton, after 1897 it was raised to 48 marks 75 penni per ton. This high duty is, however, only about one-third of that charged on imports from other countries. The

whole import of rolled and smelted iron which is permitted to enter Russia—6552 tons—is therefore sent almost to the last pound.

Among the output of pig-iron we have still to mention the work from the forges, amounting altogether in 1899 to about 8000 tons of a value of 3 million marks against 2700 tons in 1893, 4000 in 1890 (which was a better year), and only 1700 in 1886. Included in this amount are various implements, such as axes, hoes, forks, a good many horse-shoes, and not less than 6000 tons of nails. Wire nails are an especial feature of this industry, and the insignificant and lessening amount of these now imported only includes very small nails. The production is protected by high duties, from one of 11 marks 80 penni per 100 kilo on wire nails, up to 14 marks 70 penni per 100 kilo on other kinds. There are at least five rather large factories, three on the river Loimijoki, one of these belonging to the Jokkis Company and the two others to a company which also owns another factory in the neighbouring city of Åbo, and another at Pero near Viborg. Their continued existence, however, is probably mainly due to high protective duties.

If we have not much confidence in the future of this historical and still interesting industry, it is chiefly because, notwithstanding its production of raw material for other industries, it is protected by high duties which, small as they are compared to those in Russia, are still harmful and contrary to all sound economic principles. Finland has not the best quality of iron ore, and the time is past when wood and charcoal were regarded as the best fuel. English coal is more and more needed; from 1893 to 1898 the consumption of this increased from 5000 to about

30,000 tons, and of coke from under 4000 to over 5000 tons; while charcoal has continued at about the same figure, 300,000 cubic metres; and wood-fuel has only doubled in amount, rising from 333,000 to 666,000 cubic metres, and being now about the same quantity as is used to produce the charcoal. In Western Finland especially, a large quantity of English coal is now used, and less charcoal; and this change will continue with the progress of trade. There is now a great abundance of excellent and highly appreciated iron ore in Sweden, particularly in the new mine of Gellivara, ore which is in great demand in Germany, England, and even in France. The ore is, however, sent untouched to these countries, because its treatment takes the coke of two tons of coal to one ton of ore, even such excellent ore as the Swedish. It is not impossible that some ore may be treated at intermediate places on the Swedish and Danish coasts of the Sound, because, owing to the commercial relations between the Baltic and England, and owing to the heavy goods transported from the Baltic, coals cost less in freight per ton to import than the untreated ore costs to send out. In the same way, in the United States at least one-fifth of the excellent ore on Lake Superior is treated at intermediate stations along the lakes, on Lake Michigan and at towns in Ohio and other places; only four-fifths being treated in Pennsylvania, where the coal is found. But there is this great drawback to a wider use of iron ore from Grängesberg in Central Sweden, whence there is a large import into Finland, or to a possible larger importation from the new mines in Northern Sweden; that the ice in the sea hinders all maritime transport during the winter, and it would be necessary to store large quantities of ore for a long time. As regards

the production of iron and steel in their simple forms, we can only imagine one thing which could increase the productions in countries like Sweden and Finland; this would be a larger utilisation of electro-magnetism and thereby of the plentiful water-power already used in the treatment of other metals and in the very small iron production at the mines of Vällimäki, about which we have already spoken. But at the present stage of development of the iron and steel industry we are unable to see any future for it in Finland.

In addition to 27,000 tons of rails, the iron used in these simple forms amounted in 1898 to 44,000 tons, against 13,000 in 1893, and more than 24,000 tons in the more prosperous year of 1890, when there was a comparatively large increase in all business. If we translate all iron used in Finland into pig-iron, we arrive at a total of 135,000 tons, or one hundred-weight per head. This proportion speaks fairly well for the modern development of the country. How small the quantity produced and used in Finland really is, compared with that of the great countries, is seen when we recall the fact that the production of iron all over the world amounts to 40 million tons a year. The United States produce over 15 million tons, and Germany and England about 9 millions each.

A much more satisfactory impression is given by what are known in Finland and Sweden as mechanical workshops, embracing very diverse iron industries, including the building of iron ships and steamers. We find greater progress here, and in most branches of such industries an expansion which is answering exactly to a demand, and has doubtless come to stay. Without including the workshops on the State railways, forty-three manufacturing workshops of this kind,

employing 6000 men, were in active work in 1898. The total value produced in 1899 was 25 million marks, against $19\frac{1}{2}$ millions in 1898, and $5\frac{1}{2}$ millions in 1887. In the bad years of 1893 and 1894 the production was less than half what is now produced. Foundries, which mostly belong to this class, have in seven years doubled their output, which amounted to 11,000 tons in 1899. If we add together the total production of all mines and metallurgical industries, we arrive at a total value for 1899 of $51\frac{3}{4}$ million marks, against a total of $44\frac{1}{2}$ million marks in 1898.

Notwithstanding this large progress, especially in the mechanical workshops, the import of machines and details of machinery has increased from 4 million marks in 1889, and 6 millions in 1891 (with a lapse to 4 millions in 1893), to the very considerable amount of $19\frac{1}{8}$ millions in 1898. The amount was one million marks less in 1899, because a smaller number of new factories were erected than in the previous year.

On some of this importation there is a slight irrational protective duty, which in some cases has been mitigated, though insufficiently, by a grant of free import to machines or parts of machines for the establishment of new factories. Even iron or steel ships of less than 700 tons and over 400 tons, when sold into the country, pay a duty of 2 per cent.; all wooden steamers pay the same, and iron or steel steamers under 400 tons as much as 4 per cent. We have already mentioned the recent and not very high duty on agricultural and dairy machinery. In each of the years 1898 and 1899, some $2\frac{3}{4}$ million marks' worth of agricultural machines were imported, and dairy machines to the value of upwards of $\frac{3}{8}$ million marks. In the case of some machines, for instance

those belonging to the pulp industry, the manufacturers have made such progress that they can now export to other countries. Without the import duty they would of course be able still further to develop the sale of some very paying specialities. The manufacture of locomotives at Tammerfors for the State railways has been assisted by a considerable loan and by some minor sums of money, in addition to the price at which imported locomotives can be bought. These sums are not, however, more than would reimburse the makers for the heavy expenses caused by the present tariff.

We see the progress of special manufactures, especially machines and implements, when we study the individual factories. We thereby get interesting information about past history as well as about possibilities for the future; but space does not permit a complete survey, and we can only mention a few of the largest factories. In Nyland the Machine and Bridge-building Company of Helsingfors make a speciality of railway bridges and steamers. The Sandvikens Company, also of Helsingfors, owns a magnificent dock blasted out of the rock on the sea, and therefore well adapted for repairing ships. The Fiskars Company in Western Nyland makes agricultural implements of fine iron as well as steel billets and plates; it owns two blast-furnaces, the old Visborg and the old copper-mine of Orijärvi, and a considerable amount of landed property, among which are manors well known in history such as Gennäs, formerly owned by the old family of Boije. The Billnäs Company makes a speciality of spades, shovels, and similar implements; and the Högfors factory is known for its excellent foundry work. In Åbo-Björneborg we have a Company established by and called after an English-

man, William Crichton, which builds men-of-war and other steamers; the Åbo Iron Manufacturing Company, which makes railway cars, mowing-machines, and reapers; the Dahlsbruk Company, with the largest rolling-mill in the country, whose speciality is iron-work for ships; the Mathildedal Company, which makes thrashing and other agricultural machines; and Messrs. W. Rosenlew & Co. in Björneborg, who own a great shipyard and mechanical workshops, and build steamers. In the province of Tavastehus we find the Tammerfors Linen and Iron Manufacturing Company, which, besides its textile factories for linen goods, has large mechanical shops for locomotives, pulp machines, &c. In the province of Viborg we have Gallén's mechanical workshop and shipyard, and the Karhula engineering workshop at the eastern mouth of the Kymmene River, whose speciality is agricultural machines. In the province of St. Michel are the great iron-works of Paul Wahl & Co. at Varkaus on the Saima Lake, where a river runs down from Iisalmi and Kallavesi between Nyslott and Kuopio, who build steamers for the lakes of the interior, but are connected also with saw-mills and flour-mills; and the Oravi and Haapakoski Company, whose speciality is iron tubes. In the province of Kuopio there is Värtsilä on the Jänisjoki, one of the rivers running into Lake Ladoga, with blast-furnaces, an iron-foundry, and a rolling-mill. The same company owns Möhkö, to which belongs the biggest unbroken area of landed property in Finland. Strömsdal, on the water-course which comes from Pielis in the north-eastern part of the district of Saima, has some engineering works. Each of these works has lately produced from 1 to 1½ million marks a year, the larger ones 2 millions or more. Several of them

date from the seventeenth century, and have held an important place in the early economic history of the country; but, as is natural, have nearly all now changed the character of their productions. Of lesser iron-works and engineering workshops, with a chiefly local trade, there are about fifty. At present, as we have said, it is chiefly the manufacture of machinery and other articles used in the country which has been progressing, and this will undoubtedly continue to progress.

Side by side with the great manufacturing establishments the work of the artisans has also made progress. Their output has increased in value from 3 million marks in 1893, and 4 millions in 1891 (its former maximum) to 8½ millions in 1898. Some of their trades are a natural result of modern progress, such as electric work; others are in answer to a purely local demand, and will necessarily remain manual work. Others, again, represent antiquated forms of industry, and are being superseded by the larger establishments. Curiously enough, certain artisans increase in number in bad times, the reason being that the larger works cannot then give them anything to do.

The great water-power of the country has created new works for the production of acetylene-light material. The works are at Hämekoski in Ruskiala, and at Linnakoski near Imatra, from which latter place it is intended to conduct the power into St. Petersburg. Already, however, like the establishments in other countries for the production of calcium carbide, these new establishments are finding difficulty in selling their product. Efforts have been made to form a joint trust with similar works in Sweden and Norway, but one of the new works has been, it is said, obliged to stop because of the difficulties of sale. At Tainion-

koski, near Imatra, chloric acid kali is now manufactured, a product which also requires considerable power.

We have mentioned the decrease of tar manufacture, which has now sunk in value to $1\frac{1}{2}$ million marks, greatly to the advantage of the forest. The boiling of pitch, manufactured from tar, is an industry which is worth mentioning, and again some new factories established for the manufacture of other chemical products, notably two new factories erected at Kotka and Björneborg, connected with the unfortunate Trebertrocknung Company of Cassel. They were intended to produce charcoal, wood-oil, methylated spirit and acid-chalk, but failed at the outset. The total output of the chemical industries in 1898 was estimated at $7\frac{1}{2}$ million marks.

One product of the forests, bark, and especially willow-bark, which was once exported, is now mostly used by the tanners of the country, who are allowed to import all kinds of tanning materials from other countries without duty. Half of their hides come from the country; half are imported free of duty. They produced in 1898 leather to the value of 14 million marks (nearly double the output of 1887), one single factory belonging to Åström Brothers in Uleåborg being responsible for over 3 million marks. This factory also exported about 250,000 marks' worth of saddlery. Other large factories have been established at Raumo, at Helsingfors (where the new electric tanning method is used), and at Korkeakoski in Orivesi. This latter is in connection with the only shoe factory which so far has been established in Finland, and which in the future will take a large part in the manufacture of the two million marks' worth of boots and shoes now made in the country.

The saddlery-houses, producing goods to the value of 1½ million marks, formerly exported largely to Russia, but have now been forced to abandon this export in consequence of the high import duty imposed by Russia in 1897. The export of leather was worth 2¼ million marks in 1898, but this also suffers under a duty of 18 marks 30 penni per 100 kilo imposed in 1885.

The manufacture of soap increased between 1889 and 1898 from under 700,000 marks to double that amount. Candles are manufactured by some houses from imported stearine. One Russian house, the Nevski Company, with 3 million marks capital, produces candles to the value of about 600,000 marks a year. Like many other Finnish industries, these live largely by tariff protection.

Tariff protection perhaps also accounts for the fact that the manufacture of matches has not made any particular progress; the whole sale of the country, worth about a million marks, is assured without forcing the industry to any progress. Its most important raw material, aspen-wood, abounds in the country, and there is no import duty on the chemicals which are at present used.

All over Finland numerous small flour-mills are found, as is natural in a country with such abundance of water-power. The number of these mills is estimated at 3000; most of them do small pieces of work for people who bring their grain to be ground and pay in kind or "toll"—"tullkvarnar," as the Swedes call such mills. Large mills have recently been established at Vasa among other places; they grind particularly rice, having an extraordinarily high tariff protection. The whole quantity of grain which they grind varies naturally with the harvest and with

consequent fluctuations in the import. In 1898 the value of their products was returned at 6 million marks, after the bad harvest of 1897; in 1895 it was only $1\frac{1}{2}$ million; in 1893, after another bad year, it was $4\frac{1}{2}$ million marks; in 1892 nearly 7 millions; in 1890 again only $1\frac{1}{2}$ million.

The growth of the sugar refineries is also due to a protective tariff, and it is undoubtedly by this means that their output for 1899 reached the large sum of 18 million marks, against only $9\frac{1}{2}$ million in 1889. Nearly the whole amount is produced by two large refineries, the Tölö at Helsingfors and the Aura at Åbo. If we add the amount of refined sugar imported, we have a total consumption worth about 22 million marks, double what it was a few years ago; a good illustration of the increased wealth of the people. Since 1897 raw sugar from Russia has a smaller import duty, with the result that now all sugar is bought from the Russian beet-sugar factories, which, as our readers may know, form a kind of trust in sugar under the direction of the Russian Minister of Finance. This decrease in duty has diminished the revenue of the Finnish Treasury by several millions, but it also included a fresh increase in the protective duties, to the advantage of the refineries.

The bakeries produced bread to the value of 5 million marks in 1898, against $2\frac{1}{2}$ millions in 1889, another proof of better living among the people. It is especially a consequence of a larger use of wheat-flour, to which we shall refer later.

An exception to the general industrial progress is furnished by the distilleries, which in 1898 produced only $6\frac{1}{2}$ million marks' worth of brännvin or Scandinavian whisky against $11\frac{1}{2}$ million marks in

1886. In 1897 the value of the output amounted to $8\frac{1}{2}$ millions; in the poor year of 1893 to only 5 millions. In 1865 the distillation of brännvin by anybody at home was forbidden; and an excise duty was imposed, and later on increased considerably to the benefit of the finances of the country; this was with the intention of decreasing the consumption of brännvin to a total of $11\frac{1}{4}$ million litres or $6\frac{1}{2}$ litres per head, according to the estimate of the existing population. In fact, the quantity consumed has decreased below this, and there is no doubt that the duty has assisted the work of the temperance reformers in obtaining this result. The import of spirits from other countries is not allowed, exemption being granted only to Cognac, rum, and one or two other forms. Scotch and Irish whisky is not permitted, because at the time of these exemptions it was not known in the Finnish market. The utility of this restriction seems to be doubtful; in Finland there is a belief that it assists the control of alcohol, and therefore helps the efforts on behalf of temperance.

In opposition to the use of brännvin, the more innocuous beer-drinking has increased considerably, and the breweries in Finland in 1898 produced 30 million litres of beer against 19 millions in 1893. In 1882 a duty was imposed on beer in the form of a tax on malt to the amount of 1 mark per 10 kilos. We will not here discuss the question whether a malt tax is the most just and convenient method of taxing beer. A decidedly wrong principle has now been introduced into Finland in imitation of other countries, especially of Germany, viz., a sliding scale of duties which puts a larger tax on breweries producing a larger amount; in Finland the larger duty is imposed on those which use more than 50,000 kilos

of malt. It is a practice which penalises the most progressive and economical production. Most of the breweries in Finland are small ones. The largest brewery, which is in Helsingfors, has now an output worth $1\frac{1}{2}$ million marks.

The social manners and customs of Finland and Sweden encourage a large consumption of non-alcoholic drinks, chiefly soda-water, with the result that factories have been established producing comparatively large quantities, the output in 1898 being worth about a million marks.

The production of tobacco has also increased considerably. The output of the factories was $10\frac{1}{2}$ million marks in 1898 against only 5 millions in 1889; the largest factories being those of Strengberg in Jacobstad, Von Rettig in Åbo, H. Borgström, junior, in Helsingfors, and Sergeyeff in Viborg. The raw tobacco comes now mainly from Russia, whence it pays less duty, the amount imported from Russia being two-thirds of the total value and a still larger proportion of the quantity. The duty is not very high, but there is a strong protective duty against prepared tobacco.

The progress of the printing offices is one more demonstration of increased culture. In 1898 the produce from these was worth $3\frac{1}{2}$ million marks against only 2 million in 1893 and $1\frac{1}{2}$ in 1889. If we add to this the output of the lithographic establishments, about one million marks in value, we arrive at a total of about 5 million marks. Until the evil days of the present political period Finland has also had more than 200 newspapers, using about one million marks' worth of paper per annum.

The most important manufacture, or at any rate that which produces the largest values next to the saw-mills and machine factories, are the textile industries;

and chief among these are the cotton-spinning and weaving. In 1898 these establishments produced goods to the value of about 26 million marks, which is a larger amount than that given in the official statistics. Five large factories alone produced about 20½ million marks. The largest of all was established in 1820 in Tammerfors by a Scotchman named Finlayson, who in 1812 had been told in St. Petersburg about the good opening which existed in Tammerfors, his informant being a Dr. Patterson who had returned from a visit to Finland on behalf of the Russian Bible Society. The factory is now owned by two Russian families, Von Nottbeck and Rauch, and the value of its products is about 13 million marks. There is another in Vasa producing about 5 millions, one in Forssa producing 6 millions, another in Åbo producing one million, and to these must now be added another in Tammerfors and a large one in Björneborg. In 1892 the whole output did not amount to 13 millions; in 1891 it was nearly 15 millions, and in the prosperous year of 1889 it was only 12½ million marks, or barely half of the present amount. In later times about five or six million kilos of cotton have been imported and from one to two hundred thousand kilos of thread. This amount of cotton is now four times as much per head as it was thirty years ago, in 1866-68 (0.65 kilo). In 1898 the import of finished and half-finished goods was worth 8½ millions of marks (including cotton pieces worth over 6 millions, yarns and threads 2½ millions), against a total of 3 millions in 1893, and 5½ millions in 1891. In 1899 the import seems to have been less, amounting only to 4 million marks of piece goods and 1½ of yarns and threads; figures which are probably due to a larger manufacture in the country. The amount

used in 1898 was undoubtedly of the value of about 30 million marks, and not $25\frac{1}{2}$ millions as stated, against $13\frac{1}{2}$ million marks in 1893, and 18 millions in 1891, which year was previously the high-water-mark of the consumption. The export figures have remained about the same, being $2\frac{3}{4}$ million marks for piece goods in 1898, to which must be added $1\frac{1}{2}$ million marks for thread, making a total of about $4\frac{1}{2}$ million marks of export in 1898. The piece goods exported in 1899 were of the value of 3 millions. Finer goods are imported from other countries, and cheap, glazed fabrics of bright colours from Russia. On the other hand, there is an export to Russia of other kinds, though it is hampered by a duty, imposed in 1897, of from 68 marks 40 penni to 75 marks 70 penni per 100 kilos, and even with this duty the import is not allowed of more than 50,000 pood or about 819 tons. The export also has, in fact, been limited to this small amount. In Finland itself, too, the protective duties are very high, though several times less than in Russia; they are 2 marks per kilo on plain cotton goods. Imports into Finland from Russia do not pay any duty whatever. In relation to the value of the goods, the duty on goods coming from other countries amounts generally to about one-third of the total value.

Linen goods are manufactured by the large Linen and Iron Manufacturing Company of Tammerfors, which has a nominal capital of 6,200,000 marks, as well as by two other factories which do most of their work with thread imported from England and Germany. Two-thirds of the flax comes from Russia. The import is stated to be of the value of about one million marks, nearly all of it being the simplest piece-goods, sack-cloth, and so on. As the export amounts to about

the same as the production of these factories, it seems as if the large inland consumption is still provided by home workers, that is by hand-weaving. Even the very cheap imported material pays a duty of about one-third of its value. The duty on the different articles varies from 90 penni to 4 marks 50 penni per kilo. Import into Russia is permitted under a lower duty of 6 marks 10 penni per kilo, with a maximum import of 50,000 pood or 819 tons. An article which we may mention as one with which the Russians cannot compete is white thread, which is used in Russia to tie up tea-packets. Small quantities of goods are sold to other countries, including Denmark, and some special articles are even sent to England.

There are twenty or more woollen factories, including some rather important establishments in Helsingfors and Tammerfors, in and near Åbo, and even in the country at Hyvinge. The people buy a considerable quantity of yarn from the spinning factories to weave at home, a method of manufacture which is antiquated and not very profitable. The total woollen production of the country is officially stated to be worth $7\frac{1}{4}$ million marks; but it is, in fact, nearly 10 million, as compared with $2\frac{1}{2}$ million in 1893 and $3\frac{1}{2}$ million in 1891, previously the "record" year. The import of wool amounts to about 2 million marks, on which, contrary to the general rule in regard to raw material coming into Finland, import duty is demanded. The value of woollens imported in 1898 was about 13 million marks, 9 million representing cloth and $3\frac{1}{2}$ million yarn. In 1899 the yarn amounted to 4 millions, but the cloth and other piece-goods only to 6 millions. Of this last-mentioned import $1\frac{1}{2}$ million marks' worth comes from Russia duty free, the other $4\frac{1}{2}$ millions representing a better class of goods which Russia

cannot supply. The protective duty in this case also amounts to about one-third of the value.

Hosiery and knitted goods are now made in several establishments in Helsingfors and Tammerfors; in the latter place the houses of Messrs. Dalberg & Co. and the Klingendal Company produce goods of considerable value. Here, too, protection is given by a very high duty. No export of woollens to Russia on a lower scale of duty is allowed; but the duty is lower on a small amount of hosiery and knitted goods.

Ready-made clothes are manufactured to the value of about four millions. The import duty is calculated on the material, with a certain additional sum for the work.

The Finlanders speak with some pride of these large factories of cottons, woollens, linens, and knitted goods. Several of the factories have now the most modern machines from England and Germany, and some of them give the impression of being admirably managed. Still it is only with grave doubt that we can look at the future of these industries, which, like many others in Finland, rest altogether too much on tariff protection. As long as they can increase their prices proportionately to the amount of the duty, they may continue to produce goods to the profit of their shareholders or other proprietors; but at the same time they are doing it to the loss of the nation. At present most of these factories pay large dividends, though not quite such large ones as some of the factories in Russia with the still higher duties prevailing there; but the question is how much of this revenue is due to the protective duties. It does not create a favourable impression to see several of the factories at the same time take up a variety of different articles, change their patterns, and so on. If they were not obliged to lay themselves out

entirely for the home market in order that they may make the highest possible profit out of the protection accorded by the tariff, they would probably go in much more for specialities and so obtain better general results.

It is natural to compare the manufactures of Finland with those of Russia. The textile, and especially the cotton industry, is the most important of all manufactures in Russia, and really benefits by several natural advantages; it is close to markets in which there is a large genuine demand and which use a considerable amount of cheap cotton goods; and wages are much lower than in England or in America, or even in that part of Germany where weaving and spinning have their particular home. Nevertheless it is certain that the great majority of Russian factories would be closed on the day when they could no longer live by high protective duties at the expense of the consumer. There is, however, one exception to the general rule in Russia, not less interesting because, more than any other factory in Russia, this one works under conditions very like those in Finland. Von Schultze-Gavernitz, a German author who has examined into the industrial situation of Russia with the greatest care and technical knowledge, exempts this establishment from his general opinion of Russian factories. It was erected at Kränholm, at a fall of the river Narva, by the man who introduced and for a long time dominated the cotton industry of Russia, the Anglicised German Von Knoop. It has this advantage over the factories in the interior of Russia, that it is near coal, cotton, imported machinery, and other manufacturing material which are of importance; although here, as elsewhere in Russia, high duties must be paid on raw material and other articles used. But then, most im-

portant matter of all, it has workmen of a race entirely different from the Russians, the latter being unreliable, demanding much supervision, making continual mistakes which use up material, and, finally, seldom furnishing first-class work. Von Schultze-Gavernitz calls these other workmen Esthonians, who belong to the same race as the inhabitants of half Finland; it is more likely, however, that the workmen are inhabitants of Ingermanland; but these too have been and still largely are true Finns. In this factory one man can supervise 20,000 bobbins; and it is only here that the finest thread (No. 90 S.) can be made; Egyptian cotton and combing machines are used. Where piece goods are made, one weaver takes charge of two or three looms, and one man can supervise fifty workmen. The result is that one workman here produces goods annually of the value of 402 roubles, against only 146 in Moscow and 141 in Vladimir. What is said about the workmen in this particular Russian factory undoubtedly holds good about the workmen in Finland. The Finns are inferior to Englishmen; their hands are less good; they make more mistakes. It takes time, of course, to train country workmen. But English superintendents allege that they will be able to bring the Finnish workmen to as high a condition of skill as their English companions. Even if the result is less productive than the English labour, it will probably be at least as cheap; the pay, if high according to Finnish standards, will be lower than the English. The average wage in Finland for the spinners and weavers in cotton factories is 637 marks, against 423 for the spinners and 467 for the weavers in Russia; for the weavers of woollens 521 marks in Finland against 466 in Russia; for the spinners of flax 480 marks in Finland against

332 in Russia. Notwithstanding this, work is cheaper for the masters in Finland, in spite of the low wages in Russia. At present Finnish work is estimated to cost rather more than English, but it will undoubtedly be cheaper when the hands are better instructed.

The town of Tammerfors, where most of the above and many other kinds of manufactures are established, and which is therefore called by the Finns the Manchester of their country, is at present in possession of the valuable privilege of importing all material used by the factories, including thread for the weavers, free of duty. Alexander I. granted this privilege to the town on his visit to Finland in 1819, and it was renewed by Alexander II. in 1856 for fifty years, *i.e.* till 1906. The liberty is excellent, but it ought to be extended to the import of such articles into the whole of Finland.

It is with unmixed satisfaction that we can review those great industries which are connected with the principal trades of the country—*i.e.* the creameries, saw-mills, and the manufactories of pulp, pasteboard and paper, which also produce the greater part of the values exported from Finland. In speaking about the forests, we mentioned the wealth which has lately come from them, especially through the saw-mills. As a result of the greater liberty granted since 1857—steam-power being now allowed, and the mills being no longer restricted to certain districts and certain quantities of wood, and since 1885 no longer needing any special concession for the introduction of steam into the work—a great number of saw-mills, some 500 in all, have been erected, and among these are now a number of very large mills, producing annually work worth millions of marks. More than half of these mills, especially the large ones, use steam instead of water-

power ; because it is important that they should be situated where a large quantity of wood can be collected for export instead of being tied to places near waterfalls. This is the reason why the larger works are located at the mouth of rivers coming from the great systems of lakes. Thus at Björneborg, on the southern coast of the Gulf of Bothnia, at the mouth of the Kumo River, which runs down from the lake systems of Näsijärvi and Pyhäjärvi, the Råfsö Steam Sawmill Company has its works, and Messrs. W. Rosenlew and Co. and Messrs. Ahlström have very large mills. On the coast of the Gulf of Finland, at the mouth of the Kymmene, which runs down from the lake system of Pääjärvi, in the town of Kotka, a town which has been created during the last thirty years, large firms such as Paul Wahl & Co., Messrs. Ahlqvist, the Norwegian firm of Gutzeit, the Halla Company, Messrs. W. Ruuth and others, own saw-mills which are producing millions of marks yearly. On the lake system of Saima, the biggest system of all, whose extent is continually being increased by the making of canals, it has been found profitable to build the largest mills in the interior on the lakes, where in especial Messrs. Hackmann & Co., and Messrs. Paul Wahl & Co., of Viborg, have large factories. Big mills are also found at the mouth of the smaller rivers in Southern and South-Western Finland, in which part of the country Herr August Eklöf, of Borgå, is the greatest exporter. Finally, some of the largest mills are located in the far north at Kemi, where a company has a capital of 5 million marks, at Uleåborg, and elsewhere. At present wood is being sawn and transported *via* the White Sea, where trunks and logs are now floated out from part of the Crown domains.

Some saw-mills are at the same time planing-mills,

and it is reckoned that by this arrangement, which reduces the bulk by one-sixth, one-sixth of the cost of export is saved. Planing-mills in Finland, however, play a much less important part than those in Norway. Joinery and cabinet-making has made progress, producing a value of $3\frac{1}{2}$ million marks, against $1\frac{1}{2}$ million in 1893. Some of the factories are of considerable size, as for instance those of Sandviken and Sörnäs in Helsingfors, Boman in Åbo, which produces some very fine articles, and a house in Borgå which produces even more artistic goods. Such goods, however, were imported to the value of about a million marks in 1898, and very little was exported. We will not discuss the influence on this industry of strong tariff protection, which naturally leads it to work especially for the home market. A large export can only be created by producing large quantities of the same goods. Big cities like Hamburg, of course, have a great advantage, being centres of the commerce of the world, whence goods can accordingly be distributed in large and small quantities according to the demand.

Bobbins for the large spinning factories of England and other parts of Western Europe are now partly produced in Finland, the value being about 2 million marks. The factories are large, and located in the interior, where an abundance of birch is found, two factories being owned by the Tornator Company at Lahtis in Tavastland, and at Tainionkeski, near Imatra; another by Colonel Standertskjöld, near Villmanstrand; and there are several others.

The largest and most successful industry next to the saw-mills and creameries is undoubtedly the manufacture of pulp and paper, which at once uses the chief raw material of the country, the timber, and at the same time utilises a part of the enormous water-power

which is otherwise little used. Altogether the waterfalls of Finland now actually being used are estimated to represent about 50,000 horse-power, and this industry alone uses about 30,000. Whenever we find one of these forty factories, we find a place with its name ending in "koski," the Finnish for waterfall. In addition to supplying the inland demand, the factories export goods to the value of between 17 and 18 million marks, the sum in 1899 being 18 millions. The pulp factories, of which the first large one was erected in 1865, and of which there are now twenty-five in operation, are stated to produce 51,000 tons of pulp, of the value of about 6 million marks; in reality they produce much more, but no accurate information is obtainable as to what is used in the country. Two-fifths of the output is exported, half in dry and half in wet pulp, and the latter export in particular is increasing. Of the more valuable cellulose, of which there are eight factories in operation, about 14,000 tons were produced in 1898, the value being 4 million marks, of which $2\frac{1}{2}$ million marks' worth was exported. At the same time the paper factories continue to import cellulose. Of pasteboard about 31,000 tons is produced, of the value of 4 millions, included in this being felt for roof-work, and especially asphalt felt. The greater part of the export consists of paper and pasteboard, among which the more valuable kinds of writing paper and cigarette paper have been of late considerably increasing in value. Cardboard and the cheaper kinds of paper have been increasing more in quantity than in value. Paper is made in fourteen factories, the export being 32,000 tons, of the value of over 14 million marks. Notwithstanding the import duty in Russia, the imposition of which caused the manu-

facturers at once to look out for new foreign markets, Russia continues to be the best market, though considerable quantities are exported to England and Germany, some to Denmark, Holland, and France, and a little even to Brazil and Japan. Paper to the value of 1½ million marks is imported. This large development in the trades connected with pulp and cellulose has taken place entirely during the last two decades.

Among the older-established paper-mills is the factory formerly belonging to Messrs. J. C. Frenckell and Sons in Tammerfors, with very varied goods, and where rags, straw, pulp and cellulose are all used; and the Tervakoski factory in Southern Tavastland, belonging to a company under the management of A. F. Wasenius, a mill which uses only rags and produces the finest kind of paper, which has been well represented at the various Paris Exhibitions. The first large pulp factory was established by F. Idestam in Tammerfors in 1865 and later at the Falls of Nokia in the same neighbourhood. The latter place is well known in older Finnish history, as it is to-day, for its beautiful situation on the Kumo River, where it runs out of the Pyhäjärvi, or "Holy Lake," bringing a mass of water from the Näsijärvi lake system. This company now produces cellulose also, as well as all kinds of paper. Among other mills which make partly pulp or cellulose and partly paper may be mentioned the Mänttä factory, north of Tammerfors, established by the late G. A. Serlachius; the Valkiakoski factory, east of Tammerfors; the Ingerois factory at the Anjala Falls on the Kymmene River, belonging to the Tammerfors Linen and Iron Manufacturing Company; two great factories belonging to the Kuusankoski and Kymmene Companies at the Kuusankoski Falls in Kymmene; the great new

Voikka Works on the same river, established by Herr R. Elving; and the mill of the Kangas Company at Jyväskylä in the interior on the Pyhäjärvi lake system. There are also the mills of Herr L. Hammarén at Kyrökoski in Southern Ostrobothnia, and the mill of Äännekoski north of Jyväskylä; the cellulose factory of H. Standertskjöld at Villmanstrand; the large pulp mill of the Enso Company on the Vuoksi River; and the paper factory of the above-mentioned Tornator Company at Tainionkoski near Imatra, under the direction of Eugen Wolff in Viborg. Each of these mills produces from one to two million marks a year. They have been erected at different periods, but especially in those periods of expansion in which the industries of other countries, too, have made especial progress. Much is heard in regard to this industry about the abuse of cutting down small sizes of wood. To a great extent, however, their cutting down is decidedly profitable, and it is a necessity in any scientific forest cultivation.

The total progress of these manufactures which, as will be seen by the preceding remarks, differ greatly in their national importance, may be summed up in the following figures. In 1887 the total output was estimated at 114 million marks; in 1891 at 170 millions; then less during the following bad years, the lowest being 159 millions in 1893. It increased again in 1894 to 170 millions, and rose to 284 millions in 1898, and to at least 300 millions in 1899. The number of workmen engaged in it is estimated at about 100,000, or about 4 per cent. of the total population in the country. On an average each workman produces 3115 marks against 2136 in 1887. The manufactories are mainly found in the south-west, especially in Helsingfors;

others are in Tammerfors and Åbo; others in Viborg, Vasa, Björneborg, Uleåborg, Kotka, and Jakobstad, after which come the other towns on the coast. The small towns have not progressed as much as the larger, as usually happens in these days. Considerable influence was exercised in former days by the guilds or corporations, which were finally abolished in 1879, and which, together with town privileges, gave to certain small towns an artificial advantage at the expense of other localities. In 1887 each business had on an average eight workmen and an output of 20,000 marks per annum; and in 1898 this average was twelve workmen and 36,000 marks. In 1843 most of the work was done by hand; there being ninety factories with 8500 artisans, 6000 hired workmen, and an output not much exceeding 2 million marks; while most of the master-craftsmen, notwithstanding the town privileges, lived in the country. Now only a small part of the manufacture is produced by artisans, the amount in 1897 being 31 million marks, which came from four thousand shops with 13,800 workmen.

With regard to the wages of Finnish workmen we have already quoted the averages in the textile industry. They vary considerably; for one reason, because piece-work is much in vogue. This is the case even with women and children; as an example of whose wages we may quote the women in the linen mills at Tammerfors, who receive 2 marks, the boys receiving 1 mark 50 penni, older boys 1.90 and small girls 1.40. Wages in the textile mills here, as usual, are not the highest, because the work makes less demand on the strength of the workers and is not always very trying. In the paper-mills, where the case is the same, the average wage is stated to be 612 marks,

to which must be added house-rent and firewood. In the earthenware and china works an average of 666 and 1442 marks is paid, and at glass factories 949. At the saw-mills the wages are higher, being 849 marks besides house-rent and firewood. At the iron and engineering works comparatively high wages prevail, the average being 895 at the former and 1087 at the latter, the high wages in the engineering trade being due to the rapid progress which this industry is making. In another chapter we have mentioned agricultural wages, and pointed out that even when we include in our calculation the larger property holders and peasant proprietors, the average income of a family in the country does not amount to more than 786 marks a year. The above-mentioned wages in the manufacturing trades, which it must be remembered are the wages of individuals, not of families, are therefore very favourable when compared to the incomes of the agricultural classes. The impression made on us by the appearance of the factory hands in Finland, compared with that made by country folk, is equally favourable. The Finnish workmen have their faults; they are, for instance, hardly as quick as those of the Western countries; but they excel in other directions. They stick more closely, for instance, to hard work. Generally they are superior to the Russians, but these latter are better at certain kinds of work in the open air; for instance men from the province of Jaroslav excel at all paving work; Russians are also good gardeners. In some factories we have met men who have been in the United States, and who are clever at introducing new methods of work.

Women are employed in considerable numbers in certain industries; in the textile mills, for instance,

where two-thirds of the workers are women, and in still larger numbers in the tobacco factories. The progress of the textile industry would have been impossible without women.

The law of 1889 with regard to child labour states that children between twelve and fifteen may work for seven hours a day, with half-an-hour's rest for meals, or 8½ hours when they have completed their course at school. Children between fifteen and eighteen may work for fourteen hours a day with two hours' rest for meals. No children may work at night. At first after the passing of this law their number decreased, but the factories soon accommodated themselves to the new regulations, and now children are employed in even larger numbers than before, the girls especially in weaving, the boys in glass factories.

A law of 1895, which came into operation in 1898, compels a master to pay a workman who has been incapacitated by accident, three-fifths of his wages after the seventh day of the accident; and the master must insure his workman for the same amount in case of his being incapacitated for a longer time or for life. In case of death, certain amounts are also paid to the widow, and to children up to the age of fifteen years.

Much good work is done by associations formed by workmen themselves, as well as by private efforts made by the masters on behalf of their men. In Tammerfors, for instance, we have seen excellent establishments, with libraries and well-arranged kitchens, where the workmen meet and listen to music and otherwise entertain themselves. Private schools of various kinds have been established, and the government also has organised schools, not only an ordinary polytechnic institution for the heads and managers of

departments, but schools for men lower down in the industrial scale. Socialistic movements are not unknown, but do not exercise any great influence; and large strikes are not numerous.

The Finlanders take a great interest in home occupations, and schools have been established everywhere to teach such employments, in which much zeal and skill is often developed. The State frequently contributes to them, giving for instance 300,000 marks in 1883. The Societies of Rural Economy and others have also contributed to these schools, which teach weaving and the manufacture of common implements. Many articles are manufactured all over the country, and certain parishes frequently have their specialities; as, for instance, the rocking-chairs, spinning-wheels, and thrashing-machines which are made in certain localities of Ostrobothnia and Tavastehus, and the simple waggons which are made in the province of Viborg and frequently sold in St. Petersburg. This domestic industry must not be confused with the home work which is carried on in large parts of Russia, which constitutes the whole livelihood of the people there, and does not therefore answer to the requirements of modern civilisation, inasmuch as it necessarily creates poverty. In Finland as a rule these home occupations are not carried on for the supply of family needs; but even here the form of work is not very profitable in these days of cheap factory production. We have noticed, for instance, weaving-schools teaching hand-work such as is done in the factories by machines, a decidedly unproductive employment. Much of this household industry is also very antiquated; and it is a poor argument in favour of it that the people have nothing better with which to employ their time.

Among the more important conditions of industrial development, personal capacity is always the most important. We have spoken of the workmen, of their progress, capacity, and wages. Just as important are the personal qualities found in the heads of the different industries. One reason for our belief in the industrial future of Finland is that the same men are able to manage business of varying kinds; the same names reappear as heads of different departments. This fact leads us to believe that they are as well able to develop industries which belong naturally to the country as those which merely live by artificial tariff protection.

It is not without reason that the wealth of the waterfalls is spoken of. In 1889 the chief of the Department of Communication, the late Baron G. Alfthan, ordered an examination of the waterfalls; but although this examination has not been extended to the rivers running out into the Polar Sea and the White Sea, nor to the northern portion of the rivers running down to the Gulf of Bothnia, 700 falls with above two million horse-power have been measured. It is true that the utility of the falls in the northernmost part of the country is less because of the ice at the bottom during the greater part of the year, and of other impediments; and in a great number of other rivers the power of the falls is dissipated in rapids instead of forming concentrated water-power. This is in consequence of the somewhat low elevation of the country. Among the large lake systems, however, the lakes not only form reservoirs securing a regular supply of water, but the large body of water coming out from these lakes creates everywhere a sufficiently concentrated force. Large falls are found in the northern rivers running out into the Gulf of Bothnia, but in

these particularly the water-power is spread over such a long distance of rapids that the force which it is possible to use decreases to a very small quantity. The most northerly river, the Muonio, has a fall of not less than 72,000 horse-power. Torneå has nine falls of more than 30,000 horse-power each, one of 116,000, and another of 133,000. The river Kemi, or Kemijoki, has three falls of more than 50,000 horse-power each. These rivers respectively receive the water of 34,000 and 53,000 square kilometres of land; and the snow on the mountains, which melts late, furnishes a continuous body of water. Iijoki with its affluents has eighty falls; and, on its own water alone, one of 123,000 horse-power, and nine others varying from 11,000 to 55,000 horse-power. The Kajana and Emäjoki, affluents of the Uleå or Oulunjoki, have seven falls of 10,000 to 27,000 horse-power. After the Uleå has flowed out of its large lake it has one fall, the Niskakoski, of 158,000 horse-power (one of the instances of great reduction for practical application, for it can only be reckoned at 27,000 horse-power), and another, the Pyhäkoski or "Holy Fall" of not less than 222,000 horse-power. Few of the rivers farther down the coast have very large reservoirs, with the exception, however, of the Lojo River in the south-west and the lake-system of Jänisjärvi in the south-east, from which come the rivers which we mentioned when speaking of the industrial establishments. A couple of large falls, also previously mentioned, are found on the river Kumo where it runs out from the lake-system of Näsijärvi and Pyhäjärvi; and we have referred to several others on the rivers which carry water down from the north to this system of lakes. More considerable, and also already noticed, are the four falls at the mouths of the Kymmene River, which carries down the water from

the Päijänne and Puulavesi lake-systems; these have a horse-power varying from 24,000 to 38,000. Still larger are those of the Vuoksi, which has four falls of 31-33,000 horse-power, two of 44,000 and 48,000, one of 52,000, and finally the Imatra fall of 117,000 horse-power. In this part of Finland, on the Vuoksi and other rivers which flow into the Lake Ladoga, it is believed by many that the wealth of water-power is going to create a particularly rich industrial future. One advantage is that electricity now makes it possible to carry the power to a considerable distance; and also the electricity which is created by these falls can now be directly applied in metallurgy as in other industries. Certainly the plant costs more with water-power than with steam. Furthermore, it is useless to undertake such new enterprises until certain other conditions have come into existence; among which a market for the resulting output is not the least important. Calcium of carbide, for which there was supposed to be an unlimited demand, is said to be one of the last instances of this difficulty.

Like most other countries in past centuries Finland had an abundance of monopolies, including even such a popular industrial material as tar, of which a company had the monopoly. There were also privileges for the towns. In the latter part of the eighteenth century some considerable men came to the front—Chydenius, who was in advance of Adam Smith, and others who might be compared with, and were in some degree connected with, the French physiocrats, especially with the more liberal parts of their doctrine. To-day the Finnish government, acting on the principles of modern liberalism, has lent very considerable assistance to the industrial development of the age, and in particular has done great service by permitting

complete industrial liberty. We have referred to the gradual abolition since 1857 of restrictions on the saw-mills. Not long afterwards it was declared permissible for everybody to enter into commercial and industrial business if he merely reported himself to the authorities, and either paid a tax in the town or, if he were in the country, paid a certain fee for a licence. Finally, in 1879, complete industrial liberty was granted by the abolition of the old guilds or close corporations, and of the privileges of the towns. Practically there is no hindrance to the formation of joint-stock companies. Only Finlanders, however, can be directors. While in Russia it takes a year to get through the formalities of formation, and costs generally more than 1000 marks, it costs in Finland six marks, and is done in a week, or at the utmost in one month's time. The worst remaining hindrance is the protective tariff. In this matter little progress and even some retrogression has taken place. This is in consequence of the peculiar arrangement by which, according to the old Swedish constitution, tariff-regulation does not come within the powers of the Diet. There is no doubt but that this protective tariff imposes on the people a tax of many million marks a year, and of more than the taxes paid by the same articles to the Treasury. It would be interesting and not impossible to calculate how much of the increased price of various goods is due to this tariff protection, which is the worst possible system under which manufactures can develop.

The extension of the field of protective duties is often a means of producing greater liberty. The amalgamation of the Finnish tariff with the Russian, to which we shall have to come back, would be a step in the opposite direction, and an enormous diminution

in existing industrial liberty. The Russian tariff imposes a high duty on the principal as well as on the accessory materials of manufactures, on coal, iron, machinery, cotton, and on all the chief necessities of life. The duty is generally three or four times as high as the duty in Finland, and often even more. It is twice as high on iron and steel billets, more than twice as high on iron plates, forged iron, nails, and machines; ten times as high on wool, and three to four times as high on cotton yarn. The duty on iron ore would increase the price of pig-iron by not less than 35 marks (or 24 per cent.) per ton, and of steel billets, for the manufacture of which 1.32 tons of raw iron is needed, by at least 50 marks, without reckoning any profit, if their production in the country was continued; otherwise, if imported, by 80 marks per ton. The hides and the tanning material of the great tanneries would cost considerably more. Even the cotton manufacturers, judged by their present output, would have to pay $3\frac{1}{2}$ million marks more duty on cotton and half a million more in duty on other imported material which they use. The introduction of these tariff duties into Finland would cripple many of the best manufactures of the country, especially its agriculture and forest industry. This evil influence is apparent enough in Russia, where it contributes greatly to the impoverishment of the farmers, and results in a final loss also to the manufacturers, who have to sell to the people and even to the government, which is obliged to look to the principal industry of the country for its main revenue. It might benefit particular businesses, such as the factories of pulp, cellulose, and paper, as well as the iron-works in the east, which would find a larger market in Russia. Possibly also more waterfalls would be utilised and divers new

factories erected. But it would be bad business, and result in a loss for the nation, not to mention the fact that it would in several ways create a difficulty in the present economical organisation of Russia itself. It would not be the Finlanders themselves, but rather, as in Russia, foreign capitalists, who would establish the new industries and make money at the expense of the people. The manufacturers themselves would for the most part be of the same character as at present in Russia, where so many mines and factories live at the expense of the people, and their owners often benefit enormously. But every such factory is obliged to close on the day when reason resumes its sway and liberty enters. The present progress in Finland, which is closely connected with the progress of international commerce, would be destroyed; the whole industrial life of the country would suffer; civilisation would receive an enormous set back.

CHAPTER VII

COMMERCE, NAVIGATION, AND FISHERIES

THE rapid progress of Finland's commerce, one of the proofs of the country's development, is of recent date. The old Custom House statistics are of little value because of the corruption of the officials, and the large amount of smuggling due to the high Customs tariff and other causes. Nevertheless, in 1836, when the situation of the country was already greatly improved, the whole foreign trade amounted only to 18 million marks, about equally divided between imports and exports. In 1846 it was 31 millions; of which the exports were only represented by the same amount as in 1836, 9 million marks, and the balance of 22 millions was import trade. In 1841 it had increased to 44 millions, of which 26 millions represented export and 18 import; but in 1851 the total was only 37 million marks, of which 10 millions represented export and 27 import; while the average for all foreign trade during this period was only 32 millions. In 1866 the figures increased, showing a total of 76 millions, of which 28 millions were export and 48 import. In 1875 it went up to 243 millions, 85 millions export and 158 import, and in 1876 decreased again to 230 millions, 90 being export and 140 import. In 1886 the total had decreased to 176 millions, of which only 99 represented import. But from that time foreign trade increased rapidly, to a total of 203 millions in 1888; 236 millions in 1889;

only 233 millions in 1890, though with a balance of 48 millions in favour of imports; and again only 239 and 241 millions in the unfavourable years of 1892 and 1893, with a balance of imports, however, of 52 in 1892 and 11½ in 1893. In 1894 the total was again 274 million marks, with scarcely 3 millions excess of imports, it being now Finland's turn to liquidate its debt to foreign countries. In 1895 the total had increased to 293 millions, with a balance of hardly 7½ millions of imports; and in 1896 to 332 millions, with 14 millions excess of imports. And then in the following years came a large increase with an especially large excess of imports; 371 millions in 1897 with a balance of 34 millions of imports; 417 millions in 1898 with 57 millions excess of imports; 436 millions in 1899 with 66 millions excess of imports. This last year's total shows an increase of only 24 millions on the preceding year, instead of 40 millions increase as shown in the two preceding years. In 1900 the total was 468 millions, with the considerable excess in imports of 73 millions owing to special reasons. During the last ten years there has been a doubling of the whole trade, and Finland has thus come to possess a foreign trade which is large relatively to the number of its inhabitants. The average for this trade in Finland is 165 marks per head of the population; 66 marks per head being the average for all countries. In Russia it is only 25 marks. But the Finnish average is less than the neighbouring Scandinavian countries; Sweden having had a foreign commerce in 1898 averaging 220 marks per head, Norway 308, and Denmark 575 marks per head.

It is interesting to examine the character of this commerce. As regards the export we have already

called attention to the most important article, timber, the export of which had increased in value in 1900 to 114 million marks, against 101 millions in 1899, 94 millions in 1898, 82 in 1897, and 71½ millions in 1896. In 1899 planks, deals, and battens together produced 7 million marks more than in 1898, planks and deals producing 16 millions against 12 in 1898, and battens 32 millions against 29. Boards produced 31 million marks against 33 millions in 1898. It is only in a slight degree that the increase of the past few years is due to the increased prices obtained. In 1876 the total export of wood was 50 millions, against 12½ millions in 1866, less than 5 millions in 1856, less than 4 millions in 1846, and only a little more than 2 millions in 1836; so recent is the development of this wealth. We have referred to pulp, cellulose, and paper, the value of which in 1899 was not much less than 18 million marks. In 1876 it was only 3½ millions, in addition to 1¼ million marks' worth of wall-paper; at that time, before tariff alterations, a great article of export to Russia. We have referred also to the diminution in the manufacture of tar; and now willow-bark, too, which produced 1½ million marks in 1876, has ceased to be exported to any great extent, most of it being used in the country. Cattle are exported somewhat less: only in special years have oats showed a considerable export value; fish produced about 3 million marks in 1899, but this was no increase on former amounts. In addition to wood, including pulp and paper, it is now, as we have said, butter which is the largest contribution of agricultural industry to the export trade, and which produces the largest amount. In 1897 this sum was 30 million marks for about 14,500 tons; a steady increase from the 7000 tons of

the period 1889-91. The small export overland to St. Petersburg is not included in this figure. The total export in 1884 was only 4000 tons, 4500 tons in 1868, and only 500 tons in 1852 and 1856, the first and last years of the Crimean War. In 1894 it was 13,300 tons, the value being $24\frac{1}{2}$ million marks. We have already mentioned how, in spite of a larger production, the amount of the export decreased in 1898 to 12,500 tons and 27 million marks, and in 1899 to 10,000 tons and $23\frac{1}{2}$ million marks, on account of the increasing wealth of the people and a larger home consumption. Also the contribution of Finnish manufactures to a larger general export has been mentioned, as well as their less favourable points, and in particular their connection with the Russian import tariff. In addition to the goods mentioned, the tariff also favoured hides, which were exported to the value of 4 million marks (3 million of which was for tanned hides); cotton and linen in piece-goods to the value of 6 millions; yarn and thread $2\frac{1}{2}$ millions; metals and machinery 5 millions; and finally stone and stone articles to the value of 4 million marks. The export of ships ought to be especially mentioned; in 1899 it had risen to a value of $5\frac{1}{2}$ million marks, of which the export to Russia, mainly steamers, was worth $4\frac{1}{2}$ millions. The whole body of exports, however, depends and will continue to depend on the progress of forest exploitation and agriculture.

Notwithstanding the increased production of grain, this and flour are the two articles of the import which have increased most, and it is evident that this large increase is by no means due to isolated bad harvests. In 1899 the import reached 291,000 tons of the value of 59 million marks, against 194,000 tons and 44 million marks in 1898; 200,000 tons and 41

million marks in 1897; 190,000 tons and 29 million marks in 1896, and for instance 85,000 tons and 15 million marks in 1888, 69,000 tons and 13 million marks in 1887; and 77,000 tons and 21 million marks in 1886. Rye and rye-flour have especially increased; rye to 78,000 tons and 11 million marks in 1899, against only 37,000 tons in 1898, 30,000 tons in 1897, and between 20,000 and 21,000 tons in 1895 and 1896; rye-flour to 145,000 tons and 23 million marks in 1899, against only 95,000 tons in 1898, and about the same amount in former years. The amount of imported rye has in latter years been four times as much per head as thirty years ago, in 1866-68 (3.79 kilos per head). The import of wheaten-flour has increased considerably, and the increase has continued into the year 1900, the amount per head now being five times as much as in 1866-68, when it was only 3.56 kilos. Even oats, which a few years ago, in 1896, could be exported to the value of 7 million marks, are at present imported in considerable quantities—a proof that the cattle are being better fed. Maize was imported to the extent of about 10,000 tons, and the value of about $1\frac{1}{2}$ million marks, notwithstanding the duty on its import from any other country than Russia; against 8000 tons in 1898, 4000 tons in the two former years, and only 1500 tons in 1891. In 1899 about $9\frac{1}{2}$ million marks' worth of animal produce was imported, against less than 7 millions in 1898, less than $5\frac{1}{2}$ in 1897, and $4\frac{1}{2}$ millions in 1896. The import of meat and pork, partly American—notwithstanding the prohibition to import American pork without special permission—was of the value of over 7 million marks in 1899, against less than 5 millions in 1898, and less than 4 millions in 1897. The import of

meat and pork was already in 1898 1.28 kilo per head, as against .06 in 1866-68. The import of eggs in 1899 was 25 millions, and the value $1\frac{1}{2}$ million marks; in 1898 19 million eggs were imported, and in 1897, 18 millions. The import of apples in 1899 was of the value of $1\frac{1}{2}$ million marks; but there was a larger import of other fruits. We have spoken too about the greatly increased consumption of sugar, of which 27,000 tons were used in 1899, against 25,000 in 1898, 21,000 in 1897, 18,000 in 1896, and 16,000 tons or less in 1895 and 1894; the weight being reckoned in refined sugar. In 1886 the amount imported was under 10,000 tons of the value of about 5 million marks; but in early years, for purposes of comparison, one million marks should be added for the confectionery which up to 1896 was imported from Russia, but which is now manufactured in the country as a result of the duty which has been imposed. The import of sugar was in 1898 9.43 kilos per head, or nearly five times as much as thirty years ago (2.04). Coffee was imported in 1898 to the amount of 8,400 tons; in 1899 to the amount of 8,100 tons, against only 6,000 tons in the period 1894-96, and 5,000 tons in 1893. The value in 1896 was more than 13 million marks, a figure due to exceptionally high prices, and $5\frac{1}{2}$ million marks in 1886. The import in 1898 represents a consumption of 3.20 kilos per head, or three times as much as in 1866-68 (1.11). Tobacco increased, as already mentioned, to 4 million marks in 1899, against 2 millions in 1886. If we also here compare the figures of 1898 with those of thirty years earlier, the period of 1866-68, we find an increase in consumption of from 0.42 to 5.74. Petroleum rose to 19,500 tons with a value of $2\frac{1}{2}$ million marks in 1899, against 17,500

tons in 1898, 16,400 tons in 1897, 15,000 in 1896, 13,000 in 1895, 7,000 in 1888, and not much over 5,000 tons in 1886. In 1898 it was 6.63 kilos per head against 0.8 thirty years earlier. All these figures tell an eloquent tale of the progress and well-being of the people. Equally worth mentioning is the import of fodder, which in 1899 included 30,000 tons of wheat-bran, 3,000 of rye-bran, and 5,000 of oil-cake, with a total value of 4 million marks. Like the import of maize, this import of fodder is trifling compared to other countries, Denmark, for instance; but it is a new and noteworthy item in the Finnish imports. Phosphates increased to about 14,500 tons in 1899, against less than 11,000 in 1898, and 7,750 tons in 1897. The import of coal in 1899 was 255,000 tons, of a value of 5 million marks, against only 164,000 tons with a value of less than 3 million marks in 1898, 176,000 tons in 1897, 95,000 in 1896, 74,000 in 1895, and only 43,000 tons with a value of less than a million marks in 1886. Compared with thirty years earlier it was in 1898 more than four times as much (62.35 kilos per head against 15.21). Of cement, 26,000 tons were imported in 1899, against 17,000 in 1897, and only 8,000 in 1895. Several other articles show figures of equal interest, as, for instance, the increased amount of dyeing material. Metals were imported in 1899 and 1898 to the value of 23 million marks against 16 millions in 1897, and 13 in 1896; and machinery (including lately some electric machines) to the value of 18 million marks in 1899, 19 millions in 1898, 12 millions in 1897, and 9 millions in 1896. The decrease of machinery by one million marks in 1899 against an increase of 7 millions in 1898 was largely due to a smaller import of locomotives, which are nowa-

days also manufactured in the country. The import of dairy-machines and vessels decreased from about $\frac{3}{4}$ to $\frac{1}{2}$ of a million, because in 1899 fewer large creameries were erected. Ships were imported in 1899 to the value of over $7\frac{1}{2}$ million marks, $4\frac{1}{2}$ millions of this being for steamers, against 7 millions in 1898, $2\frac{1}{2}$ in 1897, and 3 millions in 1896. Among raw material imported we find such articles as flax to the value of 1 million marks, cotton 6 millions, wool 2 millions, and some yarn and thread. Tanning materials amounted to 5,000 tons in 1899, against 2,500 in the two preceding years. An interesting import is that of books, mostly, of course, Swedish, the value of which in 1899 was $1\frac{1}{4}$ million marks and $1\frac{1}{2}$ million in the two preceding years. Of more doubtful meaning is what we learn from the import figures of piece-goods in cotton, wool, linen, and knitted goods. The import reached the considerable figures of 19 millions in 1898, and 18 millions in 1897, against $14\frac{1}{2}$ millions in 1896; which, of course, indicates the progress of popular wealth. In 1899 it was again less, being only 14 millions; cotton goods representing 4 million marks, against the 6 millions of 1898, and woollens representing 6 millions instead of 9. This difference is undoubtedly due to the establishment of mills in the country itself, which had now begun to bring their wares into the home-market; but on account of the protective tariff this is a progress of more than doubtful utility to the country.

Trade with various countries presents several points of interest concerning the economic situation and calls for consideration, especially as regards the influence exercised by the tariff relations with Russia. The trade with Russia is, of course, the largest, and would

probably be so even if a special tariff did not contribute to such a result. In 1899 the commerce amounted to 140 million marks, of which 85 millions were represented by import and barely 55 by export. In 1898 the total was 132 millions, 82 import and 51 export; in 1897, 120 millions, 72 import, 48 export; in 1896, 103 millions, 55 import, 48 export. When more reciprocity was introduced in 1859, trade increased at once; the export to Russia in 1861-3 was three times what it had been in the previous decade. In the years 1867-9 the trade with Russia was 52 per cent. of the whole commerce with other countries. As the rouble went down in value, particularly, for instance, during the war with Turkey in 1877, this for the moment caused a larger export from Russia to Finland and less import from Finland to Russia; since, when the value of money sinks, prices in the country do not at once follow those of international trade, whose prices are expressed in the money of the world. In the seventies commerce increased with other countries, without, however, diminishing that with Russia. The above figures show that it is especially the imports from Russia which have increased of late. The larger part of this trade is a natural enough consequence of the neighbouring position of the two countries and the difference in their productions. It is due to no tariff-favour that an import takes place from Russia of 37 million marks' worth of grain, rye 158,000 tons, worth 24 million marks (including rye-flour 90,000 tons with a value of 14½ million marks, and unground rye, 68,500 tons with a value of 9½ million marks), 23,000 tons of wheat-flour with a value of over 7 million marks, 6000 tons of barley with a value of 1 million marks, 3000 tons of malt at a value of over 500,000 marks, 11,000 tons of oats with a value of 1½ million marks,

and some buck-wheat and millet with a value of one million marks. A more doubtful matter is the import of 6700 tons of maize from Russia, since it is free of duty, while maize from other countries pays duty. The same is the case with pork, salted or otherwise preserved, and apples which are imported from Russia to the value of about a million marks. Then there is the relatively valuable import already mentioned of 4 million marks' worth of bran and oil cakes, of which the greater part comes from Russia; there is also meat and other animal produce, and 25 million eggs with a value of $1\frac{1}{4}$ million marks. Also we have one million marks' worth of potato-meal, onions, and other vegetables; flax-seed to the value of one million marks; crushed bone half a million marks, and hide worth 2 million marks. The advantage for Finland is doubtful in the case of those goods which are imported duty-free from Russia, alone of all countries; such as those mentioned above as well as petroleum and other oils valued at 3 million marks; ready-made clothing valued at about 2 million marks; cotton piece-goods to the value of 3 million marks; woollens to the value of $1\frac{1}{2}$ million marks, some linen goods, and again some yarn, and thread valued at $1\frac{1}{2}$ million marks; shoes to the value of one million marks; and finally $2\frac{1}{2}$ million marks' worth of rubber goods, especially rubber shoes, which are much used in this northern climate. We have also those articles on which some duty is paid, but less duty than when they are imported from other countries, such as 24,000 tons of sugar of the value of 8 million marks; half the Finnish import of tobacco; and the wines and liqueurs which are, still less than tobacco, a cheap product in Russia. On the other hand, the export of Finland to Russia consists partly of articles whose import would

be natural from a neighbouring country, such as butter and milk, cattle and fish to St. Petersburg, firewood to the value of 3 million marks, hides to the value of 3 million marks, wooden articles, and so on. But here it must be admitted that the tariff advantage, though by no means so considerable as in the case of the imports from Russia to Finland, is important; it favours even such articles as pulp, cellulose and paper, of which 14 million out of 17½ million marks' worth goes to Russia, as well as other goods, such as machinery, metal ware, yarn, thread, piece-goods, glass, earthenware and china, of which we spoke when discussing the export of these articles.

England holds first place among the countries receiving exports from Finland; even more decidedly than is shown by the Custom-house statistics, because some exports to England pass over other countries near Finland. According to these statistics, however, the total export to England in 1899 was of the value of 55 million marks, included in this amount being 12 million marks' worth of butter, and a third of the great export of wood. Comprised in this latter export are battens to the value of 17½ million marks, and planks and deals to the value of 7½ millions, besides forms of wood exported to England in larger quantity than to any other country, such as boards to the value of 7 millions, pit-props to the value of 2½ millions, bobbins and squares for bobbins to the value of one million, paper to the value of 3¼ millions, and paste-board to the value of one million. Other exports include oats to the value of one million marks, besides tar and some other articles. On the other hand, England imports into Finland machinery and other ironware to the value of 5¼ million marks, steamers among which the ships above 700 tons are of the

value of $4\frac{1}{4}$ million marks, yarn, cheap linen and mats worth $3\frac{1}{2}$ millions, and tallow to the value of one million marks. Wheat-flour and meat come, of course, from other countries, especially the United States, only passing through England; which is also the case with cotton to the value of $3\frac{1}{2}$ million marks, and one million marks' worth of wool. The total import from England in 1899 was of the value of about 41 million marks.

In the commerce between Finland and Germany, on the contrary, the imports are the greater, representing $81\frac{1}{2}$ million marks against $16\frac{1}{2}$ million export. The import in 1899 was $6\frac{1}{2}$ million marks larger than in 1898, when, like the import from England, it was again 9 million marks higher than in 1897, and again in that year 7 million marks higher than in 1896. It was largely represented by German merchandise, such as rye and rye-flour, to the value of 10 million marks, woollens 3 millions, clothes one million, hops half a million, seeds one million, sugar one million, plums one-third of a million, drugs one-third of a million, cement half a million, besides iron, ironware, and bicycles, particularly electric machines, and some of the hides imported into Finland. As an intermediary Germany imports many other articles, including coffee to the value of $6\frac{1}{2}$ million marks, and, also as an intermediary, most of the tobacco and wine sent from there to Finland, which last item is of the value of about one million marks. On the other hand, the exports to Germany include boards worth one-third of a million marks, battens $2\frac{3}{8}$ millions, and pasteboard worth one million marks. Trade with Germany has suffered by the recent protective duties, as, for instance, the export of wood from Finland to Germany. Exports from Germany into Finland were affected by the

restrictive measures which the government in St. Petersburg ordered to be introduced into Finland, too, in August 1893; but part of these were only in force till the Commercial Treaty of 1894 was signed. As a result, commerce between Finland and Germany decreased between 1892 and 1893 from 50½ to 40 million marks, while, on the other hand, commerce with Denmark, for instance, increased from 15½ to 20 million marks.

Denmark has a proportionately considerable commerce with Finland, the total imports from Finland being 15 million marks, including 4 million marks' worth of boards and 8½ millions of butter, the latter partly *en route* to England. The exports to Finland are of the value of 11½ millions, including machines, iron plates, and other metal-ware, cement, meat, a million marks' worth of cotton, textile goods, and Cognac, in most of which articles, however, it acts as intermediary.

Sweden exports to Finland 13½ million marks' worth of iron, steel, ironware (including agricultural and electric machines), cement, bricks, grain, books, pictures, and a great number of other articles. Its imports from Finland, on the other hand, amount only to a value of 7 million marks, among which are butter to the value of 1½ million; oats, half a million; some salmon; heavy timber from the State forests of Finland to the value of 1¼ million, which is imported by the Swedish mill-owners; firewood to the value of ¼ million marks; and other details. Some tendency to a decrease in this trade has been visible since the recent development of more direct communication between other countries and Finland, especially in regard to the butter-trade with England. Also the late protective tariffs in Sweden have been

a hindrance to trade, as was the high protective tariff of 1834, which contributed largely to reduce the once large trade between the two countries. There is not any considerable commerce with Norway; on the side of Finland it consists mainly in the purchase of herrings, the value of which import in 1899 was about half a million marks.

The export trade to France in 1899 was of the value of 14 million marks, including battens to the value of 4 millions, boards $5\frac{1}{2}$ millions, planks and deals $1\frac{1}{2}$ millions, and wood for pulp $1\frac{1}{2}$ millions, the latter being carried to France, instead of being changed into pulp or cellulose in Finland, on account of the French duty. It is noticeable that Finland purchases $1\frac{1}{2}$ million marks' worth of Cognac and only half a million marks' worth of wine, half of the wine being taken through Germany. There is an import of wheat-meal to the value of half a million marks; and the total imports were worth $4\frac{1}{2}$ millions.

Spain buys planks and deals to the value of 4 million marks, battens to the value of 2 million, boards one million; in all an import worth $7\frac{1}{2}$ millions; and she exports about half this value to Finland, the export including salt, wine, raisins, and some other articles. During the war with the United States in 1898, the Spanish import of wood decreased by nearly 2 millions, but has now again increased.

The commerce with Holland consists mainly of the sale of wood to Holland, especially boards and battens, the total export from Finland being worth 8 million marks. The commerce with Belgium is more equally divided, a great number of articles being imported to Finland from Antwerp, as for instance rice, railway-waggons, and rope. The total export from Belgium was of the value of about $5\frac{1}{2}$ million marks;

while Belgium purchases to the value of 7 millions, including battens to the value of $2\frac{1}{2}$ millions, and nearly one million marks' worth of boards and other forms of wood.

From the United States Finland only purchases cotton to the value of 500,000 marks. The direct commerce has not developed to any great extent.

As a remarkable example of commercial progress we will mention the sale of butter. In 1887 Sweden took the greater part, $3\frac{1}{4}$ million kilos, Russia took $2\frac{1}{2}$ million, Germany three-quarters of a million, Denmark one-third of a million kilos, and England still less. In 1894 Denmark was the chief purchaser with $7\frac{1}{4}$ million kilos, England next with $3\frac{1}{2}$ millions, Russia had decreased her import to $1\frac{1}{2}$ million, and Sweden and Germany theirs to one-third of a million each. In 1899 England, really the chief consumer, was at the head with $5\frac{1}{4}$ millions; Denmark, the great dealer in butter, being next with $3\frac{3}{8}$ millions; Sweden bought half a million, Russia one-third of a million, and Germany one-sixth of a million kilos. The total export in 1897 showed an increase of $4\frac{1}{2}$ million kilos, it being $15\frac{1}{2}$ millions instead of 11, of which the English share of the increase was $2\frac{1}{2}$ million and the Danish 2 million kilos.

It is the import duty which is the great enemy of commerce, especially the protective duty which hinders the profitable distribution of labour between various countries; and we may notice that disturbing effects are much less a consequence of duties imposed on articles which cannot be produced in the country itself, where the whole increased value goes to benefit the treasury, and where at the utmost the consumption is deranged, than of these protective duties. Also the Finnish tariff has been reformed, although much

less than most of the other departments of public life. In speaking of this question, we must first of all recall the peculiar position of this tax in the Finnish constitution. Here the system still prevails which from 1772 to 1809 was found in Sweden, by which the monarch could, without the co-operation of the Estates, regulate the customs tariff. It is probable that, if the Estates had had the same influence here as in other matters, they would have introduced the more liberal principles then prevailing. It must, however, be acknowledged that the Government, in the tariff of 1869, the main points of which are still in existence, has undertaken a comparatively considerable reform. The tariff certainly gives wide protection to most of the manufactured articles, but imposes little or no duty on the raw material which is so important for the manufacturing and other industries, or on articles which are necessities of life. Commerce also progressed considerably after the reduction of this tariff. From a financial point of view nothing now hinders the entire abolition of tariff protection; since in Finland, as elsewhere, only duties which are not essentially protective, such as those on sugar, coffee, tea, tobacco, alcoholic drinks, together with the excise duties on brännvin and beer, produce large amounts. The greatest difficulty in this respect is caused by the relations of Finland with Russia. Certain diminutions of the Finnish import duty would occasion new restrictions in the commerce with Russia. This certainly ought not to decide a question which is of so vital an importance to the whole development of the country.

A treaty made between Russia and Spain in 1888, in which Finland shared, was a step in the direction of greater liberty. Spain obtained facilities in Finland

for the import of its salt (with a duty of 25 penni per 100 kilos, against 50 for other countries), for its wine, oil, &c., and again made concessions about the import of wood, tar, &c., from Finland. But the most important of these concessions were also given to other countries which gave Finland the most favourable tariff, as, for instance, France, Italy, and Portugal. Some of Russia's treaties with other countries might also be quoted as profitable for Finland.

During the first half century of Finland's union with Russia, the customs duties were arranged on varying bases. For a short time there was a certain amount of reciprocity, but early in the twenties this was changed in the one-sided interest of Russia. According to the decree of 1835, not only could Russian merchandise be imported free of duty into Finland, except brännvin, which was forbidden to be imported, but foreign wares could also be imported without paying any duty whatever by land or by ship across Lake Ladoga. On the other hand, free import to Russia was only allowed to Finnish merchandise indicated in particular lists; all the rest had to pay the same duties as foreign imports. This system was both economically and financially a great loss to Finland. However, in the decree of 1859, Alexander II. declared that he found it "necessary to introduce greater reciprocity in the commercial relations between Russia and Finland." This decree increased, therefore, the number of articles which could be introduced free of duty into Russia, and, on the other hand, imposed financial duties on the import of certain Russian articles into Finland. But in 1885, after Finland's tariff had been reformed in a liberal manner in 1869, and Russia's tariff, on the contrary, had been increased in the beginning of the eighties, the decree of 1859

was modified so that several important manufactured products imported from Finland, when these consisted of goods also made in Russia, had to pay a duty equivalent to the difference in duties on raw material, half-finished products and parts of machinery, the Finnish duty on such raw material from foreign countries being lower than the Russian. In fact, however, the duty now imposed was somewhat higher than could be counterbalanced by these advantages. For certain Finnish articles a maximum import for goods under this low duty, or duty free, was fixed, a limitation not unknown in the decree of 1869, but now again enlarged. The principle was in this manner laid down of the protection of Russian manufactures against Finnish competition. Later, in January 1890, a committee was nominated to discuss tariff unity with Russia, but the difficulty of executing the proposals now formulated for this purpose caused the discussion to drift on without any result. After deliberations by fresh committees a new ordinance was published, which had been proposed by the Russian Minister of Finance and approved by the Finnish Senate in May 1897, which limited still more the free import from Finland to Russia, and increased the differential duties, increasing, on the other hand, the former maximum import in the case of some articles. In Finland it was now believed that the matter was finally settled, especially as the clause in the treaty of 1894 with Germany, according to which the import duty in Finland could have been increased by 50 per cent. of the difference between the Finnish and Russian tariff, was not utilised. In 1893 the Finnish Senate had been ordered to introduce measures for the increase of the Finnish tariff up to the figures of the Russian, but it had recommended the abandon-

ment of this plan, and had not received any further communication. This fact, too, contributed to the belief that a final arrangement had been made. Nevertheless, in July 1900 the Senate received a new communication from the Governor-General to the effect that the Emperor had decided in the beginning of May to order a reconsideration of the manner in which the Finnish tariff could be identified with that of the empire, and free trade between the countries perhaps be established; and that for this purpose a new committee would be nominated composed of Russian authorities as well as of some Finnish delegates. It was the desire of the Russian Minister of Finance that the Finnish tariff should be brought up to the Russian level before the end of 1903, when new treaties with several Powers would be under discussion, and it would presumably be useful to raise the duties to a high amount, on which concessions might be given. We see here another proof of the difficulties of treaties when used as a means of obtaining larger liberty. We see also a remarkable expression of the small regard which the Russians have for the interests of Finland, and also how little they care for the stability of the tariff, and the whole economical situation which depends on it.

The present rule is that all Russian merchandise can be introduced free into Finland, with the exception of brännvin, which is forbidden, and of sugar, tobacco, wine, liqueurs, and margarine, which pay much smaller duties when coming into Finland from Russia than the same articles from other countries; so much less, indeed, that already the duties on sugar now imported from Russia instead of from other countries represents yearly a loss of several millions. On the other hand, Finland is only allowed to export to Russia certain products of agriculture and other industries of the

same character. Some wares must on import into Russia be accompanied by certificates showing that they originate from Finland. Other articles mentioned when speaking of the production of iron and iron wares, copper and copper wares, earthenware and glass, textile, spun and woven goods, as well as paper, pulp, and cellulose, are imported under somewhat lower duties, but in the case of most of these articles only a very limited import is allowed. The manufacturing industries governed by these rules are those of the greatest importance to Finland. Other manufactured articles pay the same duty as those imported from other countries. On the side of Russia it is an accepted principle that the Finnish manufactures must not be favoured at the cost of the Russians, and that the duties which they pay shall be equivalent to the advantage gained by their cheaper and partly free import of raw material. This is right. But it is a very curious development of this principle when the Russian Government also demands that the Finlanders shall pay for their advantages in water-power and wood, and that they shall import only certain quantities of their products. This is to regard Finland from an economic and not only from a financial point of view as a foreign country. Protection is demanded and given by such a measure against the simple use of the natural productive advantages of a country. The present arrangement is a kind of treaty between two foreign countries. Some of the concessions under it are a gain for liberty, but others are one-sided and hardly just. The good and bad can, of course, only be seen by examining the details, especially where the matter in question is the interest of one single country, which is not necessarily the same as what is for the general good.

While a tariff union with Russia under the present protective and prohibitive system would injure the sound natural portion of Finnish manufactures, it would, as already said, be entirely destructive of commerce, trade, and navigation. It would increase the price of all present imports,—coal, iron and other metals, machines, and the most common necessities of life, such as sugar, coffee, and salt. By destroying the import trade it would also hinder export, first by rendering life and production more difficult and costly; then by diminishing the already small freights which ships can take home to the country; finally, by decreasing the value of the means of payment in foreign countries—its bills of exchange on these countries. If we consider its influence on commerce, that most useful aid to civilisation, we shall understand still better the extent to which this measure would be destructive of the whole national development. We have no need to speak here of its influence on the situation in Russia, on its commerce, agriculture, and business in general. We have already spoken of the effect of the high Russian duties on the most important Finnish manufacturing interests. In reality, all who produce goods are consumers by the necessities of their life and their industrial activity. It is calculated that a simple fisher family consisting of four persons, which is rather below the general number, would have to pay eighty-five marks more per annum, fifty-five marks fifty penni as increased duty on the salt needed for forty barrels of Baltic herrings prepared for sale, and thirty marks for such simple necessities as coffee, chickory, iron, &c. A Finnish cottier who keeps four cows and a horse would have to pay fifty marks extra for iron, nails, woollens, coffee, chickory, &c. A common peasant proprietor with forty cows and five horses would have to pay

fifty-four marks extra for iron and nails, and seven marks twenty penni for artificial manure, or a total of 240 marks more. It is not certain that a larger revenue would be obtained for the Treasury; the moderate Finnish tariff, just because of its moderate and less protective character, brings in much more per head of the population than the Russian tariff—not far from three and a half times as much, the last year's average being from thirteen to fourteen marks per head in Finland against four marks in Russia. The truth is that the Russian system is in the highest degree harmful to Russia herself, increasing the price of such raw material as pig iron by 70 per cent., billets of iron by 45 per cent., and steel by 35 per cent; increasing enormously the cost of such enterprises as the construction of railways and factories, the building of ships, farming, and, indeed, of all industrial life, not to mention the increased cost of such common things as salt, coffee, and sugar. In Finland, all industries and industrial life in general necessitate commerce with other countries; and free import from Russia could not replace this. It is not only that most things would cost more; but many would be unobtainable from Russia. It would not, as is the case with tariff unions between many other countries, be an advance. It would be an enormous set-back to the whole of civilisation. It is to be hoped that the Finnish nation will not be obliged to witness the fulfilment of this menace.

As shown by the figures of the total Finnish commerce with other countries, the value of the import is as a rule much higher than the export. Partly, this difference is only apparent; the value of the imports, which are liable to duty, being calculated more exactly than the exports. Partly, it is due to the calculation

of the value in both cases being made in Finnish ports, the import figures being therefore increased by the addition of cost and profit of commerce and transport, the export figures being given without this. One reason for the existence of this surplus, in so far as it is existent, is that foreign capital is imported to Finland, where relatively good opportunities exist for its productive use, such as loans for the building of railways, or loans (relatively few during the past year or two) for the development of private industries. Such borrowed capital is always imported in the form of articles necessary to life and production, or, what is possibly more correct, provokes such import. The surplus is also to some extent caused by the simple fact that the Finnish commercial marine takes part in the transport between Finland and other countries, and in general trade as well. Theodore Wegelius calculates that out of the 57 millions excess of imports in 1898, 16½ millions can be thus explained; out of the 67 millions in 1899, 20½ millions; and out of 73 millions in 1900, 21½ millions. He arrived at this result by calculating a freight profit of 80 marks per ton on the tonnage in 1898, of 90 marks in 1899, and of 95 marks in 1900, deducting 10 per cent. of the whole amount for inland shipping, which has nothing to do with foreign commerce.

Finland's commercial marine is not without importance, but has not increased much during the last few years. It consisted at the end of 1889 of 2,281 ships, with a minimum tonnage of 19 tons, and a total tonnage of 318,000 tons; in 1896 of 2,132 ships and 313,000 tons; in 1876 there were 1,900 ships and 285,000 tons. The reason of this diminished increase is that the marine continues to consist mainly of sailing ships. It was composed in 1899 of 2,020 sailing

ships, with a tonnage of 271,000 tons, and only 261 steamers with a tonnage of 47,000 tons. It may also be mentioned that nowadays pine as a building material has been to some degree superseded by oak, which is not common in Finland. Part of this marine, including the steamers, consists of very small ships used chiefly between the inland ports, and especially on the lakes. Small steamers, or launches, are owned here by most of the larger proprietors. On the sea in 1899 there were 1759 ships, with 271,000 tons; on Lake Ladoga 107 ships, with 16,000 tons, of which seven were steamers with 400 tons; and on the Saima Lake 415 ships with 32,000 tons, of which seventy-two were steamers with 4,000 tons. Most of the sailing ships are owned by men living on the coast outside the towns. In modern times numerous very small and very large ships and fewer middle-sized ships have been built. But on the whole the sailing ships of Finland are now antiquated, and it is an extraordinary commercial chance which during recent years has allowed some old valueless wooden ships to earn during the year the whole value of the ship. If Finland desires to maintain her position on the sea she must acquire steamers. While on the whole shipbuilding has been inconsiderable of late, relatively more steamers were built during the years 1889 to 1891; and again during recent years a greater number of steamers have been built. But according to the whole tonnage Finland does not now stand high in the ranks of ship-owning nations. In present circumstances, and in imitation of other countries, there has naturally been a question of State subsidies for certain lines of steamers, especially for the export of butter to England.

It is in consequence of the slower progress of the

steam part of the marine that Finland has not kept her share of foreign commerce. In 1899 the total number of clearances for ships of 19 tons or over was: Arrivals, 8,185, with 1,999,000 tons; outgoing ships, 8,208, with 2,005,000 tons. In 1876, when there were more small sailing ships, the figures were: Arrivals, 9,364, with 1,314,000 tons; outgoing ships, 9,220, with 1,311,000 tons. In 1866 the figures were: Arrivals, 3,742, with 517,000 tons; outgoing ships, 3,901, with 529,000 tons. In 1868 the figures were much higher, and they have of course moved with the commerce. A considerable number of the incoming ships are in ballast, though a very small part of the outgoing, the reason being that there is not enough return freight to be equivalent to the large outgoing freight of wood. Thus the ships going to the Baltic have a specially cheap freight home of merchandise, such as coal and iron, and to Finland also of grain. In Finland in 1899 only 5,098 ships, with 1,021,000 tons, came in with freight, and 3,087, with 978,000 tons, representing half of the total tonnage (amongst these being the greater portion of the sailing vessels), had only ballast. Almost all the outgoing ships, on the contrary, had freight, these numbering 7,210, with 1,825,000 tons, against only 998, with 180,000 tons, which were in ballast. These last were evidently only a number of very small vessels. Most of the space freighted with cargo is on board steamers, the amount being in 1899: Arrivals, 757,000 tons on steamers, against 264,000 on sailing vessels: Outgoing, 1,250,000 tons on steamers, 575,000 tons on sailing vessels. From 1867 to 1869 the proportion was entirely different, being at arrival only 36 per cent. for steamers and 64 per cent. for sailing vessels; at departure (where wood fills a larger space),

17 and 83. Now the proportion is again entirely changed. In 1899 arriving steamers had 76 per cent. of their space freighted, sailing vessels only 24 per cent.; and even at departure the steamers had 70 per cent. and sailing only 30 per cent. As a result of this the Finnish commercial marine, which still consists mainly of sailing vessels, now plays a much smaller part. In 1867-9 Finland's share of the freighted tonnage at arrival of ships with freight was 80 per cent., against 20 per cent. for ships from other countries; in 1894-6 only 63 against 37; in 1899, 60 against 40. Among the outgoing ships in 1867-9, the proportion was 69 against 31; in 1894-6, 43 against 57; in 1899, 45 against 55. Next to Finnish ships the German ships hold the first rank. Until recently it was English ships. The German ships represent now about 10 per cent. of the total, the Norwegian about 9½, the English and the Danish each above 9, the Swedish 7¼ per cent.

In 1895 about 6,000 families were supposed to live by fishing. They had 9,000 boats, all small, manned with from two to four men. The whole take was reckoned at from 17 to 18 million kilos, of which 11 million were from the sea, 5½ from the lakes, and about three-quarters of a million from the rivers. In reality, more was probably obtained; the reports are not complete. The largest quantity, 8½ million kilos, was represented by the Baltic herring, or strömming. The common herring, of which three hundred years ago an enormous quantity were caught in the Baltic, is now rare. The small anchovy, or "hvassbuk," has a certain importance in the south-west. From the sea are obtained 1½ million of common inland fish, pike, bass, perch, &c., which here are found in the sea, because it contains only a very little salt. Half a million kilos

of salmon-trout are also caught, and the same quantity of smelts; codfish, flounders, eels, &c., are also found. From the lakes are obtained $3\frac{1}{2}$ million kilos of the commoner kind of fish, and about 2 million kilos of excellent salmon-like fish, besides salmon, salmon-trout, and a fish in Finland called "siklöja," or "muikka," well known, under the name of "white-fish," as one of the finest fishes in the western part of the great American lakes; also sik or gwyniad. Salmon holds, of course, a very considerable place, especially in the rivers and lakes, and is, next to the Baltic herring, the most important fish; it is exported to the value of more than half a million marks. Salmon-fishing furnishes excellent sport in the northern rivers, in the Kemi, Ijo, and Uleå; in the Kumo there are more salmon-trout. In Lake Ladoga sturgeons are taken so big that the fishermen, when they take them in to St. Petersburg, sometimes prefer to let them swim behind the boat. Of crayfish half a million kilos are now exported, to the value of about 200,000 marks. Seal shooting is of importance; less, however, in Lakes Ladoga and Saima, where certain specimens of seal are supposed to indicate that these fresh-water lakes were once connected with the White Sea.

The Finlanders are not abreast of the times in their treatment of fish; generally it comes into the market dead, and the new method of killing the fish at once and transporting it in ice or refrigerators is not much known. At Ekenäs, in the south-west, some anchovies and Baltic herrings are canned or otherwise prepared. In some places the smoke-method of Kiel is employed. The Finlanders themselves eat most of their fishes strongly salted, a national taste hardly beneficial to the health of the people.

The fishery rights in Finland are regulated in

ordinary fashion and comparatively well. In the middle of the eighteenth century, when enclosures began to take place, efforts were also made to allot the right of fishing among the inhabitants, in the same manner as the lands were divided. To a great extent, however, the fisheries are still used in common, or according to peculiar regulations made by the villagers themselves. The general rule is that one-third of the streams shall be open in order that the fish may pass. Only the fishing rights in closed lakes from which there is only one outlet, and which do not form parts of larger water-courses, may be held as private property. The government owns most of the salmon fisheries, and some other people are in possession of peculiar rights arising from old customs. On the sea the land-owners have rights as far as 1200 feet out into the water, reckoned from six feet depth. Everybody, however, may fish with hooks and lines. Fresh legislation will now extend the right of private persons in certain directions; for instance, in the sea and the great lakes to a distance of 500 metres. Also a more precise definition will be given of closed waters. Among waters which are subject to private claims may also be reckoned small gulfs from the sea which do not exceed eight square kilometres in extent. Measures will be taken against the fouling of the water by the bark of floated trunks as well as against disturbing specially protected places by dragging the lakes for iron ore.

Until now very little has been done for artificial fish culture. The people themselves transplant fish and roe by old primitive methods. Very successful experiments, however, have been made with several American varieties. There is no doubt but that the enormous lake area of Finland, representing 11 per cent. of the whole country, and in a large part of the

south more than half the country, might produce a much larger catch, as well as the sea near the coast. In the Finnish lakes the catch is only $1\frac{1}{2}$ or at the utmost 3 kilos of fish per hectare, against 25 in East Prussia, and 45 in Silesia. Some private societies, including one on the river Vuoski, do good work. The Government Inspector ought to have larger means at his disposal. There is certainly a source of wealth here which it would pay to develop in the same manner as, for instance, in the United States, where the natural conditions are very similar.

If we look at a map of Finland we notice that the situation of Northern Finland is the same as that of Russia before Peter the Great. It is a large country without any outlet to the sea, although the sea is not very distant. In fact, this northern coast is endowed by Nature with great riches which only need to be utilised. The adjoining Russian coast on the Polar Sea, and also the coast running down into the White Sea, are as rich as that of the adjacent Norwegian coast, offering the best opportunity for fishing in the world, and rich in cod and other fishes. The Gulf Stream keeps it open the whole year, and it differs in this respect from the coast of Finland farther south. It has at least three most excellent harbours, Peisenfjord, Jekaterin (since 1900 called Alexandrovsk), and Jeretik, of which only the harbour of Jekaterin is now being utilised, owing to measures taken by the late able Governor of Archangel, Engelhardt. There are excellent localities for docks, wharfs, and everything else needed in a great harbour. In fact, the poor population of the interior has during a number of years regularly migrated to this rich coast in order to participate in the fishing. For some years, from the middle of the century until about 1875,

there was also a regular emigration to the Norwegian ports, every year some people remaining there after the fishing season. Now when opportunities are better at home, and more emigration has also been going on to the United States, fewer of the fishermen remain to increase the Finnish population of the Norwegian Finmark. The reason why a larger number prefer the Norwegian to the neighbouring Russian coast is said to be the more advanced state of civilisation which is found there; merchants and doctors abound, with means of communication such as telegraphs and steamships, and, not least, good administration and order. So at least the fishermen themselves say.

There has often been a question of attracting the Finlanders to the Russian coast also. If this is to be done, it will certainly be necessary to introduce Finnish jurisdiction. An exchange of Finnish and Norwegian territory has been suggested, but the more natural method of procedure would be to give at least part of the Russian coast to Finland. It was only in 1826 that this whole northern territory was regularly divided between Russia and Norway. For at least three centuries the Danish-Norwegian Government had collected taxes along the whole coast, part of which is called the coast of Murman, that is, of the Normans, because the Northmen were here in olden times. Russia had at the same time taken taxes from those of her subjects which were wandering about in the interior. Nobody thought of Finland in the division of 1826. In more liberal days, in 1864, a promise was first given that Finland should have part of the coast and of its harbours, in return for a slip of land ceded to Russia in the south-east of Finland, where the Imperial rifle-factory of Systerbäck is situated; but the promise was not kept. There is

now hardly any population in this great northern country. On the coast there are a couple of thousand persons living by fishing, about 1000 Finns, 250 Russians, 150 Russian Carelians, and some Lapps. Of these Lapps, who number about 1000 in the whole Russian Lapmark, a few are Lutherans using books obtained from Norway; while most are of the Greek Orthodox Church, knowing, however, literally only three words about religion, the first three of the Confession. The great country farther south, as far as Kem, a small place not far from the renowned Solovetski Island Monastery on the White Sea, is inhabited by at the most some 20,000 Carelians, separated from the Carelians in Finland by their religion and lack of culture. In fact, the Greek Orthodox religion is next to impossible for these northern countries, for the simple reason that it does not allow the use of meat, nor of milk or eggs on the greater number of days in the year, whereas strong animal food seems to be an absolute necessity for people who live near the Pole. Also the land can hardly be utilised for any other purpose than that of stock-raising. There is enough grazing, at present very little utilised, but nobody will raise stock when milk and other produce may not be used. It is unnecessary to explain to what use the Finnish administration and the Finnish people might put these natural conditions, which are in many ways rather favourable. Also the streams on which the wood must be carried down, which is now growing in value in the Northern Finnish Government forests, run either to the Polar or to the White Sea. From the Norwegian ports in the same district, fishing, seal-catching, and whaling has lately been carried on in northern latitudes, bringing in between one and two million kroner per annum. Finally, the new Russian

port of Jekaterin would undoubtedly be a less expensive and more decidedly successful work in Finnish hands. There would, in all these regions, be numerous openings for Finnish activity, fishing, navigation and commerce ; while the rights of nobody would be violated, because until now there has hardly been any population whatever found here. It would mean a new era of colonisation, as in Siberia and America.

CHAPTER VIII

MONEY AND BANKING

THE monetary system is closely connected with the development of banking. This was the opinion of the Estates of Finland at the Diet of Borgå in 1809, when they professed their intention of making the Russian silver rouble the monetary unit, and asked that they might establish a National Bank in order to put it into circulation. We find the same connection throughout financial history. Good money is the basis of credit in all its branches; and in Finland, as in other civilised countries, the National Bank and other monetary institutions ensure its circulation and to some extent themselves create the media of circulation.

The monetary situation of the country was a curious one during the first generation after the union with Russia. Notwithstanding the efforts of the government, money continued to circulate in Swedish paper more than in Finnish or Russian roubles. The Russian armies had brought Russian paper money into the country, but notwithstanding the decision of the Diet in 1809, the people continued to prefer Swedish notes. The Russian notes were irredeemable, and neither these nor Russian silver money were known to the people. The continuous decrease in the value of Swedish notes consequent upon too large an issue contributed rather to spread them in the interior of Finland. The merchants, who received more

of these debased notes for the same quantity of merchandise, made large profits by placing the notes with their customers, who only understood later that they were steadily decreasing in value. As is always the case when money is decreasing in value the lower classes and the remoter districts of the country were the chief sufferers, because it took time before the decreased value became known there. Even in the interior of Eastern Finland commerce still took the same old route as before, over Ostrobothnia into Sweden. Only the province of Viborg, which was used to Russian money, because the people were accustomed to Russian rule, and trade with St. Petersburg was larger, continued to employ it. It was reckoned that at this period half the money in the country consisted of Swedish notes. Decrees were issued then and repeatedly afterwards that taxes should be paid in roubles, that all bills and commercial arrangements should be negotiated in them, and that the small Swedish notes should be confiscated and given to the informant, but without result. Several times the government were forced to allow taxes to be paid in Swedish money, because otherwise it could get nothing; and the outcome was that during the greater part of this early period, notwithstanding all decrees, matters remained *in statu quo*. The Finnish Bank which was now established tried in vain to replace the small Swedish notes by its own issue of notes of twenty, fifty, and seventy-five kopecks, as well as of one, two, and for some time of four roubles. By 1821 it had succeeded in getting a little over 2 million roubles into circulation; but this amount decreased afterwards till in 1833 it was 828,000 roubles; and it was some time later before it again rose to between 2 and 3 million roubles. It was only in 1840, when the Finnish

Bank was open to exchange silver, and at the same time had been entirely reorganised, that redemption began; and in the three years 1840-3, a little more than 6 million daler in Swedish banknotes, worth about 3 million daler in silver, or 12½ million marks of Finland's present money, was redeemed. In the Northern province of Uleåborg it took nearly twenty years before the circulation of Swedish money was replaced by what was now declared to be the national money.

At the Diet of Borgå the Estates had demanded the establishment of a "National Exchange and Loans Bank," and had requested that this should be supervised by representatives of the Estates, according to the old Swedish constitution. This last demand was not conceded, although afterwards four auditors were appointed, one representative from each Estate. The first establishment was called the "Exchange, Loan and Deposit Office"; then this name was changed to "The Finland Bank of Exchange, Deposit, and Loans"; the institution being best known simply as "The Finnish Bank." The Bank with its small notes had a difficult task to keep pace with the circulation; its capital was altogether too small for any considerable activity; and as it was permitted by the authorities to lend money for long periods to landed proprietors and manufacturers, it had hardly any means for real commercial transactions.

A great step in advance was taken in 1840 when it was finally decided that the Bank should not only issue notes in larger amounts of three, ten, and twenty-five roubles, but should also exchange them on demand into silver. This had become possible because the same reform, the redemption of notes into silver, had been carried in Russia during the previous

year of 1839. The older irredeemable Russian and Finnish paper money disappeared then from circulation. The decision of the Diet in Borgå in 1809 that the silver rouble should be legal money was now finally carried out. There was, however, this weak point in the banking law of 1840, that the Bank of Finland was also obliged to exchange Russian banknotes into silver. The dangerous consequences of this decision appeared in 1854, when the Russian Bank was forced by the Crimean War to stop the payment of its notes.

Great progress had in several ways taken place in the principles and practice of bank administration, but in some other respects the old principles continued in force too strongly in the Bank's method of transacting business. There was too much delay in obtaining loans and discounting bills. Even in places where there were branch offices, a demand had to be sent to the head office of the Bank, which was now at Helsingfors, and not as at the commencement at Åbo, and it took days or weeks to obtain an answer. During the first half of January the Bank was entirely closed for the audit. The rates of interest and discount were no longer perfectly immobile, but were changed by the Government, that is, the Economic Department of the Senate. The fundamental principle of the administration continued to be wrong. The directors thought it their duty to consider the public interest, instead of acting in a business-like way and considering principally the profits of the Bank, the market rate of interest and discount, and the best possible security. It continued to lend money in order to prop up divers industries, not least among these the landed proprietors; and new branches were opened. For instance, when the Crimean War had destroyed half of the

commercial marine, the Bank granted loans for long periods to naval constructors, also to public associations and municipalities. It continued to be a favour to obtain a loan, and instead of rendering service to the whole public, the Bank assisted a few privileged persons. By maintaining a rate of interest much lower than the market rate, and by allowing loans to remain without amortising, the borrowers were too often allowed to continue their antiquated business methods without keeping pace with modern methods. As a natural consequence of this, such loans lacked security and were often lost, and the Bank was without means to render assistance in periods of difficulty. During the general financial crisis in 1847-8, it was found necessary to grant debtors a moratorium of three years, and when the Crimean War and a subsequent short expansion of business was followed by another general crisis in 1857, the Bank was again without any means. Although the Bank of Finland had been obliged in 1854 to stop the exchange of its notes into silver, it had retained the rule which had regulated their issue, that notes might not be issued in any greater proportion to its silver than that of fifteen to seven. It could therefore have exchanged into silver its own notes, but to redeem those of the Russian Bank too was of course an entire impossibility. The Bank could not as a consequence act with the vigour and elasticity which was necessary in order to satisfy the demands of the crisis of 1857, as well as of the following period.

In response to a proposal of the Senate, the Emperor decreed on the 4th of April 1860, that Finland should have its own monetary unit, the mark, or Finnish "markka," the equivalent of a quarter of a silver rouble, and divided into 100 penni. It was

obvious that Finland had better have a smaller unit than the rouble, without losing the connection with the rouble unit. One advantage gained was that the new unit, the mark, became identical with the French silver franc. A Mint was established in Helsingfors in 1861 for coining silver money, one and two mark pieces, as well as pennis for small change. For the time it was obligatory to accept the paper money, but several measures were decided on for the purpose of forcing silver coins into circulation. A certain amount of energy was employed, but hardly enough. The Diet in 1863 sanctioned the proposition of a government guarantee for a foreign loan of 30 million marks, which the recently established "Finlands Hypotheksförening" (an association of mortgagers of landed property) desired to obtain. A condition was made that 8 million marks of the loan should be deposited in the Bank of Finland. When this had been done, the negotiations with St. Petersburg were continued, and the consent of the Russian Minister of Finance to the desired currency reform was obtained. The Emperor Alexander II., who had followed the question with great attention, signed finally in November 1865 a decree that only coins should be legal tender in Finland; and that the Bank of Finland notes should only provisionally, until 13th March 1866, be legal tender when offered in payment together with silver coins, of which there was not yet a sufficient quantity in circulation. This "mynt-realisation," as it was called, was not made without difficulty, and it resulted in considerable loss to many persons because it was not enacted more rapidly. The notes decreased in value in Finland as well as in Russia. For a time the difference between the value of the notes and the silver increased to 40 per cent., and it was as high as

20 per cent. even during the execution of the reform itself. The man who had bought paper money at this low value, and who must now reimburse in silver, suffered thereby a very considerable loss. A petition was sent requesting other terms of redemption, but the Emperor did not think it just to change the declared ratio between silver and paper; he held that it would be a breach of good faith. The more recent conversion of paper into gold in Russia was based on an opposite view, and took place at the current rate of exchange, which is quite right and just. An industrial revolution has taken place when money has decreased in value, and to increase it arbitrarily involves a new revolution. The situation was so much the more difficult because one of the periodical monetary crises of the world was taking place in 1864-6. Finland itself suffered from unusually severe famines in 1862, 1865, and 1867. The Bank, after this monetary reform, was obliged to be much more cautious, as the large amounts deposited by the Hypotheksföreningen had soon been withdrawn.

These difficulties, however, were only of a temporary nature. By the introduction of the silver standard, Finland had now obtained a firm basis for its monetary system. Silver was then the basis of the monetary system in the most important countries, with the exception of England. France itself, together with the Latin Monetary Union and the United States, had both silver and gold, but in practice they chiefly used silver, until the great modern production of gold brought more of this, the most valuable metal, into circulation. Finland, its Bank, and its whole system of banking and credit, was now emancipated from the influences of the fluctuating Russian paper money.

The new order of things worked excellently at

first, but the situation soon changed. In the great countries which held to a double standard, gold, which was now produced in quantities greater than the demand, became the real means of circulation. This fact was soon recognised by the most important countries, and when the situation once more changed, and another excessive production of silver again menaced the circulation of the gold—since a cheaper metal will always supplant a dearer—the more important States, the United States as well as those of the Latin Union, found it necessary to stop their free coinage of silver. Then gold alone became the actual standard; silver coins, which could no longer be obtained in unlimited quantity from the Mint, were by this limitation kept up in value, so that they were only really representatives of the gold which was circulating, and were soon even of a value double that of the metal contents. After the Franco-German War, Germany too adopted the gold standard, without, however, introducing the franc as the unit, as Finland had done in its system of silver coins. The formation of a large monetary union was thereby checked; the German mark was one-third of the existing Prussian thaler, and rather an equivalent of the English shilling, twenty marks making one pound. The Scandinavian countries introduced at the same time their krone or krona unit also based on gold, but with a crown as nearly as possible the equivalent of their older coins. Silver continued to decrease in value, and it was evident that, in order that the value of its money might no longer continue to fluctuate, Finland would be obliged to follow the common movement. In a few years gold became the standard coin of all countries except the silver country, Mexico, and other countries where its piastres circulate. Silver continued to go down

during the years 1873 to 1876, and the Bank of Finland acted therefore wisely when, like its Scandinavian contemporaries, it tried to change its metallic reserve into gold instead of silver. Nevertheless in 1875 the proportion between gold and silver had not varied very much from the ordinary ratio of 1 to 15½; and it was therefore natural that this ratio should be accepted. Again, however, it took too long a time before the reform was carried out, and when the gold standard was finally introduced in 1877 the variations were already so considerable that the ratio was not quite just to the debtor, who had borrowed less valuable money and must now pay back more valuable coins.

The present coining law was enacted, having obtained the consent of the Diet, on the 9th August 1877. According to this law gold is now the only standard; the unit is the French gramme, and the unit of counting is preserved; two gold pieces are coined of 10 and of 20 marks, containing the same mixture as 10- and 20-franc pieces. Everybody can go to the Mint with gold and obtain, instead of the metal, through the Bank of Finland, its equivalent in gold coins with a reduction of ½ per cent. for coining expenses. Gold coins alone are legal tender for the payment of unlimited amounts. Also 1- and 2-mark silver pieces are coined, of which, however, nobody need accept more than 10 marks; and 25- and 50-penni pieces, of which nobody need accept more than 2 marks, and finally, copper pieces of 10, 5, and 1 penni are coined, of which nobody need accept more than 1 mark. The coins and their divisions are very practical and convenient. Very little gold is in circulation. The people prefer bank-notes, as is the case in most other countries where it is the custom to have paper of a reliable

character and readily convertible. In reality there is no reason why gold should circulate instead of remaining in the cellars of the banks, where it better serves its principal purpose of maintaining the national money on a par with the money of the world. Finland thus acts in the same manner as the Scandinavian countries and Holland, where the monetary system is as good as that of any other country. The main circulation continues to take place by means of the notes of the Bank of Finland for 5, 10, 20, 50, 100, and 500 marks.

The Bank of Finland has been reorganised in such a manner that it not only secures the monetary system of the country, but maintains the national credit better than before. The organisation of this Bank, and of the whole national banking system, has been one of the finest and most important reforms of the excellent liberal period which followed the accession of Alexander II. In 1859, before the introduction of the silver standard, changes were introduced into the Bank with the intention of forming it into a real, modern institution of credit; and measures were taken, as soon as the Estates were again called together, for the still better safeguarding and development of the institution. The Swedish political and legal organisation, which had largely fallen into disuse, was now brought back to life. The Bank of Finland received a constitution analogous to that of the Swedish Riksbank, but with the further advantage that it obtained an independent management. According to the law of November 9, 1867, voted by the Diet, the Bank is, from January 1, 1868, carried on under the direction of the Estates represented by their delegates, and in such fashion that further changes may take place according to the decision of the Estates, and subject to the

approval of the Finnish government. The Estates choose four delegates, one from each Estate, as well as four auditors; and these delegates form an administration corresponding to the English Board of Directors. They decide, for instance, according to the suggestions of the managers, the rates of interest and discount. The managers—called directors, as in Germany, Scandinavia, and France—are nominated by the Emperor, the President is proposed by the Senate only, and three other managers are proposed by the delegates of the Estates. At each Diet a Banking Committee is elected to examine the administration of the Bank and to propose any new rules which may be necessary. At the Diet of 1872 a complete code of rules was adopted, which has been several times amended. Until 1876 the Bank of Finland also took care of the Treasury funds, but since that date a separate Treasury Office, or "Statskontor," has been established. The capital of the Bank has several times been increased by means of a portion of the profits, and it has now been brought up to 25 million marks, with a reserve which was 9 millions in 1901, and will shortly be brought up to 15 millions. At the same time a considerable portion of the profit of the Bank has been applied by the Diet to the payment of divers expenses concerning matters which depend on the Estates.

The main object of the Bank continues to be the circulation of notes, but there is now established in necessary connection with this a full modern banking business. The recently amended rule for the issue of notes is that the Bank may issue 40 million marks without any equivalent in gold, this being the minimum demanded by the circulation according to the experience of the worst years since 1890. For the purpose

of giving necessary elasticity to the issue the government may permit a temporary additional issue of 10 million marks. For all excess the Bank must have either gold, or foreign exchange, or credit with foreign correspondents, or bonds of the class which is always marketable on foreign Bourses. Silver, either in bars or foreign coins, is excluded according to the last regulations. The Bank shall, however, always have at least 20 millions of real gold in hand. Not only notes but all money deposited on demand must be reckoned as issue which has to be covered in the above-stated manner. This system has some resemblance to the English Bank Act of Sir Robert Peel passed in 1844, in so far as it allows a certain amount of note-issue for which no covering of gold is needed, but its details render it much more elastic, and also more elastic than the German system and its imitations which place a heavy tax on a larger issue of notes. An even more important change is that the Bank, instead of tying up its resources as was formerly the case, is now buying foreign and inland bills of exchange, which mean regular returns with short periods, at the same time that it is lending on perfectly marketable paper. The Bank is somewhat stricter than private banks. It does not like renewal of bills, nor financial bills which are not a part of real commercial transactions. It lends less than formerly on paper, and, compared to the other banks, less on stock than on bonds. Since 1875 it has ceased to lend directly on real estate, and also prefers to leave loans on merchandise to the other banks. It has continued to establish branch offices, of which it has now fifteen. Local committees are formed at each branch office for granting discounts and loans.

To understand the Finnish banking system it will be necessary to speak here of the private banks estab-

lished since 1862. Thanks to the work of the late Henrik Borgström, some of the most important characteristics of the excellent Scotch banking system were introduced into Finland by the establishing of the Union Bank or "Föreningsbanken i Finland." We all know how their banking system, together with their schools, have transformed the Scotch since the middle of the eighteenth century from a barbarous nation to probably the first people in the world. The banks in Finland resemble more than those of any other country the banks of Scotland. As in Scotland so we find in Finland a few large, well-organised banks with numerous branch offices; four banks have at present 115 branches in forty different places, whereas in 1887 there were only fifty-nine in twenty-nine places. A few larger banks can be stronger and better managed than a great number of small banks; while, through their branches, a distribution of capital takes place in the different parts of the country, and the rate of interest and discount is equalised. A few banks need also much less cash. Another illustration of this system is offered by Canada. Compared with the 4000 national or note-issuing banks of the United States, which are not allowed to establish branches, the twelve Canadian banks are much stronger and the rates of interest and discount are much more equal, to the great benefit of both lenders and borrowers, and to the special advantage of the new districts which most need capital. Sweden has, to some extent, the same system; with the difference, however, that even the largest banks with their branches hardly hold the same independent position with regard to the Riksbank as do the Finnish banks, especially the three largest. The Scotch "cash credit" was adopted at once by the Bank of Finland as soon as the first private bank contemplated the intro-

duction of this system. It is a system consisting of giving credit to any reliable man against deposit of good paper or the furnishing of good personal security, with this peculiar feature, that he only pays interest on the money he actually uses. The system was first introduced into Denmark ten years later by the author of this book, by the establishment of the Landmandsbank there. This plan of calculating interest only on money actually used is the same as in the case of current accounts, on which in Finland 2 per cent. is generally paid; only that the latter case presupposes money deposited. Cash credit, however, means that money is lent by the bank, and ordinary interest paid on this, together with a small amount for the whole credit, in Finland generally $\frac{1}{2}$ per cent. per annum. One advantage of this form of credit is that it frequently gives the bank a chance of following the whole business of their clients. Another excellent system brought into use by the Finnish banks is that of the so-called "post bills," the issue against a very small payment (formerly 1 mark per 1000, now only $\frac{1}{2}$ per 1000) of cheques payable at any branch, even at any branch of any bank. This is an excellent means of sending money, particularly valuable where the post is not sufficiently cheap, as is the case in Finland since it has come under Russian direction. For a time the Union Bank issued these bills "to bearer," and reissued them when they came back, so that they were really a kind of note. As we are told by banking history, cosmopolitan Sweden was one of the first countries to develop modern banks. It is even said to have been the first country of modern times to introduce notes, which were first used there in the middle of the seventeenth century. Undoubtedly the ideas gained during the union with Sweden

have contributed to the development of banking in Finland. Still more, however, is this an expression of the high economic position held by the Finlanders.

In one point the Finns have not continued to imitate the old Scotch system, nor the modern Canadian, which latter country continues prominent in this matter. We refer to the liberty of the banks to issue notes. As will be remembered, this liberty was limited in Scotland in 1845, the year after the enactment of the Bank Act in England, to the amount of notes which the banks then had in circulation; and twice a year when the Scotch banks need more money they must send to London for gold, only to send it back again a short time afterwards. In Finland the Union Bank began to imitate the Scotch banks by issuing notes. From 1867 onwards it issued $1\frac{1}{2}$ million marks' worth of notes; having obtained the recognition of this right in the banking law of 1866. The Senate might approve statutes containing the right to issue notes of an amount equal to the stock capital of the bank, and secured by the deposit of bonds of one-ninth more value than the notes; it being only allowable to issue nine-tenths of the value of these bonds. The shareholders were not jointly responsible as in Scotland and Sweden. When later, in 1872, the Joint-Stock Bank of the North was formed it desired to issue notes also, but gave up the idea, as it could only obtain permission to issue notes for one million marks and in amounts not less than 100 marks. It is true that bank-notes in Finland, as in other countries, hold a less considerable place under the greater economic development; the deposit of money and the issue of cheques on deposit holding now a far larger place in Finland as elsewhere. The notes continue, however, to be of importance, particularly in the

country, and the profit obtained by their issue is a great help to the small branch offices in paying their expenses. To some extent it is true that the notes lent out create capital; if they are maintained and the circulation increased by the loans, then and to that extent they render the same service as gold. The chief argument on the opposite side is found in the importance of giving to the privileged national bank enough power to take care of the national reserve, which it can better do when it decides the rate of discount; and the power to decide this is again given it by its privilege to issue notes. But the question is whether it is not better that the elasticity of the circulation and credit of the country should be in the care of several banks. As a point of superiority over Sweden, Finlanders dwell on the fact that from 1886, when the Bank of Finland obtained the monopoly of note-issue, it was, like the Bank of England, no longer allowed to pay interest on ordinary deposits, and that in this manner a division of work is introduced between the national bank and the private banks, which the Swedish Riksbank would do well to imitate.

Undoubtedly Finland's bank has, on the whole, contributed to strengthen credit, and it cannot be denied that in recent times it has understood how to keep a good national reserve which can render assistance in periods of difficulty. But the Finnish economist, Professor J. V. Tallqvist, is probably right when he reproaches the management of former times for keeping the rates of discount and interest too low, contributing by that to develop speculation, and giving away the Bank's resources so that it could not assist when assistance was most needed. The Bank acted in this manner in the latter half of the seventies, when it

maintained the rates of interest and discount at too much the same level. We shall return to this point when we consider the periods of expansion and restriction in the economic history of the country. As late as the period 1886-87, it kept too low a rate of discount and of interest. Professor Tallqvist thinks that the chief cause of this was the old idea that the Bank should be conducted in part as a benevolent institution instead of on business principles. It was supposed to be for the public benefit that it should artificially maintain a low rate of interest and of discount. He thinks that these ideas about assisting instead of looking at the state of the market, which formerly hindered the establishment of a real banking business, were again prominent in the eighties during the period of economic reaction, when Bismarck abandoned liberal ideas and the rulers of many other countries became less inclined to recognise the importance of free economic activity. In Finland these ideas caused an increase in the loans given to private parties from the funds of the State. These loans also, as we shall see later, increased considerably, while the reserve of marketable bonds diminished. In recent times the general policy of the Bank, however, as we have mentioned, seems to be irreproachable. The present President of the board of managers in the Bank of Finland is Herr Theodor Wegelius, who succeeded Herr Alfred Charpentier, the latter having been made chief of the Division of Finance of the Senate in 1897. Both were formerly at the head of private banks.

The new banking law of 1886 formulated rules for banks receiving deposits or issuing debentures, and did not permit these to issue obligations payable on demand to bearer. It is by this prohibition that the issue of notes is now monopolised by the Bank of Finland.

But it is permissible for banks to issue debentures for long periods when guaranteed by the deposit of mortgages or government or municipal bonds under public control. The legal existence of these banks for the purpose of issuing such debentures is permitted for a longer period, and is no more, as formerly, limited to a period of ten years. A bank which desires such permission to issue debentures must have a capital of at least one million marks. For other banks such a capital is no longer necessary; and smaller banks are, therefore, found nowadays. Finnish citizens only can be directors of joint-stock companies and take part in private banking enterprises with joint responsibility. The banks are not allowed to place money in manufacturing or agricultural industries, or in real estate other than their own building properties. They must publish monthly statements, and are subject to public control by a particular commissioner nominated by the government. If, in addition to the reserve, a quarter of their capital is lost, they must close their doors; if one-tenth is lost, the shareholders must immediately make it good if they wish to avoid closing and winding-up.

The "Föreningsbanken i Finland" or Union Bank, the first private bank in Finland, was formed in 1862. The earliest plan was to form a bank in the special interest of agriculture; it was to co-operate with the Hypotheksföreningen, established at the same time, by placing its debentures, and for this purpose was always to hold a very considerable amount of the latter's paper. It was, however, soon seen that such a special purpose was not in the interest of the bank and the shareholders; it might amount to a compulsory tying up of capital in an unremunerative manner. This idea was, therefore, soon given up.

The bank was at first managed by the late Henrik Borgström, its main promoter and initiator, and after his early death, by the late August Törnqvist; and later by Baron J. Cronstedt as manager-in-chief and ex-Senator L. Mechelin as president of the board of directors. It has been extremely successful. During the period 1877-79 it paid a dividend of 15 per cent.; from 1880 to 1882 the dividend varied from 17 to 19 per cent.; since 1884 it has paid 20 per cent., and in later years still more, in 1900 the dividend being 24 per cent. It has at the same time been able to form a considerable reserve. When in 1896 it decided to increase its capital of 3 million marks by another million, it was able to issue the stock at 400, while 128 is the price of the paid-up capital with the addition of reserve, so that by this issue it could increase its reserve by another 3 million marks. It has now 4 million marks share capital and 8,700,000 marks reserve. The lowest recent quotation of the stock is 500, at which price it returns a little over 4 per cent. The turnover of the bank last year was about 2,600 million marks, and its deposits 88 million. Its expenses have in later years been about 40 per cent. of the gross profit.

The Joint-Stock Bank of the North for Commerce and Manufacture (Nordiska Aktiebanken för Handel och Industri) was established in the speculative year of 1872; and one of the objects of this bank, whose headquarters are in Viborg, adjacent to St. Petersburg, and whose basis was to be the metallic monetary system in Finland, was that it should also operate in Russia, where the local banks were still confronted with the difficulty of irredeemable notes. The bank was meant also to act as a *Crédit Mobilier* or Industrial Company; that is, to take part in establishing

new enterprises; and it was largely for this purpose that out of 12 million marks paid-up capital, or 40 per cent. of the nominal share capital of 30 millions, a sum of 7 millions was used at once to finance a branch office in St. Petersburg. The banking houses which promoted the bank, of which the Seligmanns in Frankfort was the best known, reserved for themselves an important privilege as to the issue of new stock. As the speculative period after the Franco-German war was, however, followed by the crisis of 1873, the capital was decreased to the already paid-up 12 millions, and the stock was also offered for subscription in Finland at 102½. In 1876 the capital was further put down to 8 millions, and 2 millions were written off as loss in Russia. This bank also, with Herr Eugen Wolff as chairman of the board of directors and Herr W. Burjam and Herr Felix Heikel as chief managers, has lately been very successful. It was able in 1896 to increase its capital by half a million marks issued at 190, and in 1898 by 1½ million issued at 200; so that, having paid out of the profit of the issue 450,000 marks to the banking houses of Seligmann and Stettheimer, it could increase its reserve to a total of 3½ millions. The dividend on its 10 million marks of share capital has during seven years averaged more than 9 per cent., which in later years has been a little less than 4 per cent. on the price of the stock. Its expenses have been less than 40 per cent. of the gross profit.

Among other banks, the Bank of Vasa was established in 1879, with the object of taking over the main part of the banking business in Ostrobothnia; but as the other banks would not give up their branch offices in this part of the country, it also established branches elsewhere. It was able to in-

crease its capital of $1\frac{1}{2}$ million by the issue in 1896 of another $1\frac{1}{2}$ million at 170; 145 would have been the price at par, reckoning the capital with the additional reserve. It has now a share capital of 3 millions with a reserve of 1,850,000. It has in later years paid 9 per cent. in dividends. Its expenses have varied considerably. The Bank of Nyland was established in 1887 with only 300,000 marks capital, but in 1890 and 1895 it increased its capital by 300,000 and 400,000 marks issued at 125 and 132; the last issue was at par, reckoning the capital with the additional reserve. It has now 1 million capital and 300,000 marks reserve, the average dividend being 5 per cent.; and the expenses being 39 per cent. of the gross profit. The Folk-bank, which it was decided to establish at about the same time, and which tried to attract depositors by giving part of the profit to those who deposited on Savings Bank terms, has increased its capital of 300,000 to 700,000 by the issue of new stock at 103, but in consequence of losses in 1896 it transferred its business to the new Privatbank of Helsingfors with a capital of 2 millions. This bank, too, with Herr E. Schybergson as manager, has been able to issue new stock at 160, increasing thereby the share-capital to 4 millions with one million reserve. The dividend in 1900 was 10 per cent. The Kansallis Osake Pankki (the Finnish name for the "National Joint-Stock Bank"), with Professor Alfred Kihlman as chairman of the board of directors and Herr F. K. Nybom as manager-in-chief, was established in 1890 in Helsingfors with $2\frac{1}{2}$ million capital, one quarter being paid up; later, in 1891, it was able to issue $1\frac{1}{2}$ million more of stock at 106, and in 1898 one million at 106, so that it has now a capital of 5

million marks and a reserve of about $1\frac{1}{2}$ million marks. Its expenses have been 39 per cent. of the gross profit. It has 27 branch offices, and holds more ordinary deposits than any other bank. During the last few years it has paid a dividend of 9 per cent. The Joint-Stock Bank of Åbo with Herr E. Dahlström as chairman of the board of directors and Herr J. O. Wasastjerna as manager, and the Joint-Stock Bank of Tammerfors with Herr E. Borenus as manager, each with 3 million marks' capital, are new institutions. The Maanviljelys-jateollisuus pankki (Bank of Agriculture and Manufactures), established in 1898 with a capital of 3 million marks, and a reserve of 300,000, is the only bank which has not been successful, and it has therefore, according to the banking law, been obliged to close its doors. Connected with it was the small bank of Nykarleby.

In order to give a more complete idea of the business done we will give in round figures, representing millions of marks, the most important items from the statement of the banks.

The Bank of Finland had at the end of the following three years:—

	CREDIT.	1879.	1889.	1899.
Gold reserve		17	22	21
Silver		9	3	2
Current accounts with foreign corre- spondents	}	11	16	22
Balance of first-class bonds saleable in foreign countries		5	13	22
Foreign bills		1	2	7
Bills on Finland		10	19	33
Loans		11	8	13
Cash credit		3	4	4
Bank buildings		...	1	1
Sundries		4	2	1
Total		71	90	126

MONEY AND BANKING

207

	DEBIT.	1879.	1889.	1899.
Notes issued		37	55	73
Deposit on demand and post bills		7	8	18
Debt on amortisation		4	3	1
Capital		6	10	10
Reserve		9	7	16
Profit not employed		8	7	8
Total		71	90	126

Among later changes up to the end of June 1901 may be mentioned an increase in the discounting of bills on Finland to 39 millions, in foreign bills to 10 millions, and loans to 16 millions; an increase natural in a period when several private banks were obliged to decrease their business. The reserve has at the same time been increased considerably, but is now being used largely to increase the capital to 25 millions, while the reserve itself is to be brought up to 15 millions.

The private banks had at the end of the years:—

	CREDIT.	1879.	1889.	1899.
Cash		5	8	10
Credit with foreign correspondents } and foreign bills		3	16	22
Bonds		8	15	28
Bills on Finland		16	37	124
Loans		11	21	85
Cash credit and current accounts		8	17	93
Bank buildings		...	1	8
Total		51	115	370

	DEBIT.			
Stock capital and reserve		15	18	53
Deposits and loan on time		27	77	282
Running accounts		6	13	19

Since the end of 1899 the discount and loans have increased, but, latterly, also the deposits; and the less

favourable situation and decrease in business, such as has also occurred in other countries, seems again about to give place to a more favourable situation. The balance of the banks, of private banks as well as that of the Bank of Finland, makes on the whole a very favourable impression. It will be noticed that it is especially credit in readily-liquidated form, particularly bills of exchange, which has increased. Also cash credit has increased considerably. At the same time the period of the running of bills and loans has decreased. The expenses of the banks are on an average under 1 per cent. of the whole amount to the credit of the bank, and under 1 per thousand of the turnover; and, as we have already mentioned in speaking of the large banks, they represent about 40 per cent. of the gross profit. As we also mentioned in connection with the private banks, the great increase in the capital of the banks has taken place in latter years. It was during the period 1896-98 that this increased by 22 millions to a total of 36 millions of capital and 17 millions of reserve. The business of the private banks, which are comparatively new institutions, has increased more rapidly than that of the Bank of Finland.

Concerning these banks, as well as other departments of the economic life of the country, it is of interest to examine the periods of expansion and restriction, which return, especially in the larger countries, with a certain regularity every ten or eleven years. There is never perfect regularity; peculiar causes always exercise a considerable influence, not the least in small countries with an unusual situation. In Finland, the consequences of the frequent failures of the harvest are necessarily widely felt, as is, on the other hand, any increase in the demand for wood in foreign countries.

Lumber and other forms of wood follow to an unusual extent the general expanding and contracting movements of the great markets. But this is not always so; and, as in the case of iron, there is also a considerable demand for wood during the early days of a period of depression. Constructive work is going on; contracts have been made; it takes time before business can be stopped. On the other hand, the pre-arranged transport of wood to the markets cannot be stopped, since it takes in some cases four years from the moment of cutting down the trees in the forests. Among other disturbing causes in Finland must be remembered the two monetary changes from irredeemable notes to silver, and from silver to gold, which were especially disturbing, because long periods were allowed to elapse before the changes decided on were carried out.

The period of the sixties has been spoken of in connection with the difficulties caused by the introduction of the silver standard, and we have explained how this transformation of the monetary system coincided with severe famines, as well as with the universal crisis of 1864, which culminated in a panic in London on "Black Friday" in 1866, when Overend & Gurney failed. The situation in Finland became peculiarly difficult, because the government delayed the carrying out of promised monetary reform, and thereby uncertainty was created; this being especially the case at the beginning of 1865. The Bank of Finland's total loans decreased between the end of 1863 and the end of 1865 from 25 to less than 20 million marks, and in October 1866 to 18 million marks; while in 1865 even the Union Bank was obliged to restrict its discounts by about 2 million marks. The note circulation of the Bank of Finland decreased

between October 1865 and July 1866 from 26 to 20 millions. In 1866 the country is said to have gone through the severest crisis it has ever known. Then and in the next period all forms of banking business decreased, note circulation, deposits, loans and discounts, current accounts and cash credit. The import, which in 1865 amounted to 72 millions, was in 1866 only 56 millions; the export went down from 40 to 31 millions. It was not till 1869 that the import again rose above the total of 1865, to 76 millions; the export had increased considerably by 1867. In 1869 the harvest was better, and the whole situation was ameliorated, but commerce again decreased between 1869 and 1870. The bills held in the Bank of Finland decreased from a maximum in 1862 to a minimum in 1870; but when the total amount of the loans between 1867 and 1871 decreased from 36½ to 29½, this decrease, especially for the last year, can only be said to have been formally announced; the Bank recognised then in its accounts considerable losses, which were really incurred earlier.

Finland profited considerably by the general expansion of business in the period following the Franco-German war. The export of lumber brought much money into the country, even after the general crisis had taken place in 1873. The whole export of wood increased between 1870 and 1877 from 13 to 59 million marks. All kinds of business expanded. The bank deposits increased between 1869 and 1876 from 18 to 34½ millions; the banks' bills on Finland between 1870 and 1876 from 11 to 76 millions. At the end of 1872 there were fewer foreign bills, but in the following years, when most other countries suffered from the general monetary crisis, business in Finland continued to progress. In the years 1873-74 loans

under divers forms increased in the Bank of Finland by 30 per cent., and in the Union Bank by 28 per cent.; again in 1875 in the Bank of Finland by 43 per cent., but in the Union Bank in that year only by 8 per cent. We mention these figures because Professor Tallqvist is probably right in reproaching the Bank of Finland with too low a rate of interest and discount. This was increased by the Union Bank in the spring of 1875 to 5 and $5\frac{1}{2}$ per cent., besides the commission of 1 and 2 per cent. paid on all discounts; but it was only in the beginning of 1876 that the Bank of Finland increased its low 4 per cent. rate by $\frac{1}{2}$ per cent. It was therefore only natural that, unlike the other banks, its discounts continued to increase in 1876-77, and its loans on deposited securities even in 1878. Felix Heikel quotes the common saying that the Bank of Finland now accepted the lemons squeezed by the other banks.

Already, in 1875, lumber had gone down and the freights were also low. There was no general crisis, but the failure of the Bank of Glasgow had a certain influence on the general market. In 1877, during the Russo-Turkish war, lumber again went down, and commerce, particularly exports to Russia, suffered from the great decrease in the value of the rouble. The adoption of the gold standard in Finland in 1877 took place with less delay than the introduction of the silver standard in the sixties, though only after a considerable fall in silver and considerable fluctuation in the ratio to gold: changes which were greatly to the disadvantage of debtors. The Bank of Finland was obliged to preserve a sufficient reserve of gold, and having for a while continued an over-liberal increase of its bills and loans, it was now obliged to restrict its business. Its loans, under divers forms, decreased in

the period 1877-80 from 28 to 17 millions; while the holding of bills in all the banks in the period 1876-79 decreased from 36 to 26½ millions; loans on deposited securities in the period 1877-80 from 22½ to 15½ millions; and the total of loans in the period 1877-80 from 65½ to below 49 millions. Here as elsewhere it was noted that the discounting of bills decreased first; at the beginning of the bad time customers were ready to produce deposits for their loans. On the other hand, when the good times began again, loans on bills or personal credit were the first to be extended. As a consequence of the bad times and a poor sale, loans on merchandise, especially on deals and boards, at once rose to a rather considerable extent, decreasing again rapidly to a minimum in the following years. The banks' foreign bills, as well as their credit with their correspondents, decreased in the period 1873-78 from 30 to 8 millions; in the Bank of Finland they went down during the period 1874-78 from 24 to less than 6 millions; and if to this is added the decrease of its foreign saleable securities, from about 26 to about 9 millions, there appears here a total decrease in resources from 50 to 15 millions. Notwithstanding the formation of the gold reserve, the ready money did not increase, but decreased by some millions. In 1878, with a bad harvest, the real financial crisis developed.

As a consequence of this situation and of the liquidation which had already taken place, the general crisis of 1882-84, which raged in the United States, and was marked by the collapse of the Union Générale in France, was less felt in Finland. The prices and export of lumber had been good in 1880 and 1882, but were poor in 1883, in consequence of this general crisis. Also other export to Russia was bad. The

sinking of the value of the rouble brought a momentary profit to Russian exporters, but was a great disadvantage to all importers. In 1882 the import to Finland had been as high as 167 millions, the export as high as 120 millions; they fell in the following years to 90 millions for the import in 1886, and 77 millions for the export in 1887. The bank statements reflect the situation. The holding of foreign exchange and the amounts of foreign current accounts decreased in the period 1880-82 from 38½ to 21½ millions, and again in 1883-84 from about 27 to under 26 millions, and in the Bank of Finland in the period 1883-86 from 18 to 12 millions. On the whole, the Bank of Finland maintained a careful policy during this period; losses occurred in 1883 in two other banks, but not in the national bank. There was another partial decrease of business in the next few years, but 1887 was again a year of expansion. On the whole, the bank business progressed during this period, the total loans, for instance, in 1885-87 rising from less than 69 to over 80 millions. The Union Bank and the Joint-Stock Bank of the North wisely decreased their deposit interest. The Bank of Finland had restricted its loans in 1886, but surpassed the others now by its low rate of interest and discount, and at the same time established a considerable number of branch offices, with the result that its loans increased in 1886-87 from 21 to 87 millions. The trouble was, according to Professor Tallqvist, that leading men in the Diet had now adopted the German "social-politische" idea that industry and workers ought to be artificially assisted from above, notably by an artificially low rate of interest. Government loans of 17,600,000 marks in 1886 and of 40 million marks in 1889 contributed to

develop a speculative activity. Loans from government funds increased during the period 1887-90 from 19½ to 27 millions, while the funds sold part of their securities. The years 1888-90 were also a period remarkable for the formation of new joint-stock companies, which were floated to the value of about 24 million marks, 16 millions being subscribed in Helsingfors and its vicinity alone. A large amount of building work was also going on at Helsingfors. The total bank loans were doubled during the period 1887-90, rising from 71½ to 137 millions. It was not only bad Russian money which created commercial difficulties, but also the new and increased duties on imports into Russia imposed in 1888.

At the end of 1890 the Baring crisis in London developed into a universal crisis, which at last in 1893 devastated Australia and the United States. As on several previous occasions, it was not at the moment of the great crisis in the world's markets, but rather later, that Finland suffered. In this case it was not before the end of 1891 and the following years. Lumber had gone down, and the export was bad in 1890, decreasing in 1889-90 from 44 million to below 34 million marks; but it was as much, or more, the poor harvest in Finland in 1891-92 which caused great difficulties. The import in 1891 was 146 millions, the export 104 millions; the import went down to 126 millions in 1893, the export to 94 millions in 1892, but increased again in 1893 to 115 millions. The rate of discount in 1890 was 3½, and the Bank of Finland rate was put up then by only one-half; but at the end of 1891 it went up to 5½ and 6; and at the same time the Bank was obliged to borrow from the government 5 million marks, requiring also in the following year government assist-

ance in order to obtain a foreign credit of 10 millions. Such a foreign credit for the national bank, guaranteed by the government, is, however, provided for and approved by the Diet. Business was then suffering because of a bad harvest in Russia, and on account of the prohibition of the export of oats from Finland to other countries; also from the stoppage of traffic due to fear of the cholera, and finally from the tariff war between Russia and Germany, which had provoked in St. Petersburg an order to increase the Finnish duty by 50 per cent. Business failures were in 1889 only 155; in 1891 they were 285; in 1892 they had risen to 448; in 1893 they were 413. The speculative building going on in Helsingfors suffered especially. We have already had occasion, when speaking of manufactures and commerce as well as of other matters, to show the results of bad times by various statistics. As is usually the case, the banks profited little by the great demand for money. In 1889-90 they had paid on an average 11.6 per cent. in dividends. In 1891 there was a high rate of interest for loans, but also for deposits, and their dividend was only 8 per cent.; in 1892 it was 7 per cent.; in 1896, 6.2; in 1894 the rate of interest for deposit was decreased from 5 to 4 and $3\frac{1}{2}$ per cent., and the dividends in the three following years were about 7 per cent. Some part of this result was due to the greater competition between the now numerous banks.

The depression of trade in the early part of the nineties, in Finland as in other countries, was soon followed by a great increase. The business of the private banks was now especially extended, their deposits increasing between 1890 and 1894 from 89 to 132 millions, and their loans from 98 to 146 millions.

The monetary situation improved further in 1895, when the government borrowed 19 millions at $3\frac{1}{2}$ per cent., while 20 millions were borrowed by the Hypothekskassa and the Mortgage Department of the Union Bank. These increased resources assisted the new progress. A large number of new joint-stock companies were now formed. In 1896, besides new banks, ninety new companies were formed with a capital of $9\frac{1}{2}$ millions, making altogether, if we add the increased capital of old companies, $11\frac{1}{2}$ millions of new capital. In 1897, ninety-seven companies with 16 millions of capital were formed, or, with the increased capital of older companies, 20 millions extra capital. In 1898, 201 companies were formed with $31\frac{1}{2}$ millions of capital, making, with the increased capital of older companies, a total of $35\frac{1}{2}$ millions of extra capital subscribed. This is without calculating the loans of new companies from the banks or their issue of bonds. In 1881, $2\frac{1}{2}$ millions were borrowed on stock in the banks; in 1893, $11\frac{1}{2}$ millions; in 1898, $34\frac{1}{2}$ millions. Bank business was progressing rapidly; but while in 1891 loans and deposits balanced one another, being 110 millions on each side, it was the deposits which first increased; in 1894 these being 146 millions against $122\frac{1}{2}$ millions of loans, an excess of $23\frac{1}{2}$ millions; in 1895 the deposits were 204 millions against loans 163 millions, excess 41 millions; in 1897 deposits 288 millions and loans 264 millions, excess 24 millions; and at the end of 1898, when the figures had trebled from 1891, they were, deposits 319 millions and loans 330 millions, the excess of loans representing about 12 millions. At the end of 1899 there were only $306\frac{1}{2}$ million marks of deposits against 356 millions of loans, or an excess of over 49 millions; at the end of June 1900 the deposits were $313\frac{1}{2}$

millions against loans 385 millions, or excess of loans 71½; the deposits had at the end of May gone down to 309; later the loans decreased, deposits increased. At the end of June 1901 the deposits were 319 millions, the loans 336 millions, an excess of only 17 millions, reckoned, as usual, beyond foreign exchange and government deposits in the Bank of Finland.

Generally the business of the world has somewhat decreased since the second quarter of 1900, when the prices of iron and steel first broke in the United States, and also when the average prices, as they are calculated in the so-called index numbers in the large countries, showed a small decrease. The reaction became still more pronounced in 1901. In some countries there had been a critical situation even earlier, as for instance in some of the countries of the Balkan Peninsula and in Russia and Poland; in Russia the crisis continued longer and was sharper than in any other country. The progress had been very pronounced in the Scandinavian countries and Finland and therefore it was only natural that the reaction there should begin comparatively early; and, moreover, this early reaction seems a guarantee against later disturbances. There are evidently no such difficulties as, for instance, in Germany, where the expansion has been more considerable. The periodical variation of prices seems to be inevitable; sentiments and opinions which influence prices and credit vary in a general way; and men move in crowds. But there does not seem to be any absolute necessity for violent crises. It is during these crises that the efforts and policy of the banks exercise enormous influence, and it is satisfactory to notice that all of them, especially the leading banks, have evidently learned by experience.

They are well prepared for the disturbances which can hardly be avoided when the general economic tide is turning and prices are declining. The South African war has probably decreased the speculative tendency in England, so that there is less chance of a crisis. The United States are the field of an extraordinary expansion, but they are also developing a corresponding strength. In Germany the wise chiefs of the national bank have provided as far as possible for the reaction. The Bank of France is stronger than it has been at any previous period, its task being easier because of the small tendency to speculative enterprise in the French nation. Among the smaller nations, Holland has, as usual, so acted that it cannot easily get into difficulties while Belgium with its great enterprise, and also Switzerland, have naturally utilised the strong neighbouring market of France. The leaders of Finnish finance seem to have acted with great circumspection. That the private banks should re-discount and borrow on securities in the Bank of Finland is only natural; they have not done this to any very great extent, not much more than a total of 10 millions; and in the summer of 1901 the amounts were decreasing. On the whole they seem to have maintained their strength, and, what is more important, this has evidently been done quite satisfactorily by the Bank of Finland. Also the Bank has increased the total amount of its loans during the period 1895-99 from 31 to 40 millions, and later by still larger amounts; but, like the Scandinavian banks, it has increased its rate of discount and interest in time, and has therefore been able to preserve such resources as foreign bills, credits in other countries, and saleable bonds. At the end of 1899 it obtained a provisional loan of 7 millions from the government, and we have explained how the Di-



has wisely increased its capital from 10 to 25 millions by means of earned profit, while at the same time it holds a reserve of 15 millions, and how it has finally increased its right of note-issue from 35 to 40 millions without special covering, while at the same time it allows foreign bills to be included in the legal covering for notes, which represents a monetary increase of another 5 millions. Several other countries have recently adopted similar measures. It is an equally wise policy that silver, except coins, should no longer be regarded as cash. Some of the large countries which have gathered enormous masses of silver as reserves for their banks, reckoning it at a nominal value, which is often double that of the real value, have only a fictitious reserve. In all countries the government is closely connected with the leading banks, and it is therefore not without interest to notice the situation of the Treasury. The Finnish government has in three years decreased the amount of its credit in other countries by a few millions, the decrease being from 11 to 7 millions. Herr Theodore Wegelius reckoned that in the same three years, up to the autumn of 1900, several institutions sold foreign bonds to the value of about 9 million marks. In the same period 53 millions had to be reckoned to the credit of the country, the result of foreign borrowing, besides some conversions, some municipal loans, and loans made by the Hypothekskassa (or Mortgage Bank) and the Joint-Stock Bank of the North. Finally the government itself borrowed 25 millions as part of the expenses of the construction of railroads, to be spread over four years. All such transactions have to be considered on their merits. They are only a part of the whole mass of transactions forming an international balance: they are commendable if they pay, not because of their

influence on the international balance, which corrects itself.

An important place in the banking system of Finland is held by the Hypotheksföreningen i Finland, established in 1860, and now under the management of Colonel Kasten Antell, who is also chairman of the board of directors. It is an association of property-holders, who are jointly responsible in the same manner as such associations in northern Germany, as the Prussian Landschaften, for instance, or as the associations of property-holders in Denmark and in Sweden. At the end of 1900 it had provided about 4700 loans, of the total value of 40 million marks, of which 34 millions were still outstanding. It has obtained money by the issue of debentures which, with the exception of a few millions issued in Finland, are all placed on the great markets, especially in Germany, at first at $4\frac{1}{2}$ per cent., later at 4 per cent., and lastly at $3\frac{1}{2}$ per cent. It owns now a reserve of $1\frac{1}{2}$ million. It is controlled by the government, and the State of Finland has until now guaranteed its foreign loans. The borrowers pay at present for the first loans $5\frac{3}{4}$ per cent. and for the later loans $5\frac{1}{4}$ per cent., including interest and amortisation and expenses. Instead of increasing the interest, when, as at present, the general rate of interest has gone up, the association has preferred to let new borrowers pay a rebate on the loans which they receive, which rebate has been increased of late from $2\frac{1}{2}$ to 4 per cent., and to let the decrease which was decided on a few years ago (a quarter per cent. on the yearly interest to be paid by all debtors) continue. During recent years losses and non-payment of interest for longer periods have been entirely unknown. The loans are secured on half of the valuation. There are complaints, however, because

the association does not lend on property valued at less than 6000 marks, and even this limit has only recently been conceded after some resistance from the Senate, instead of the former limit of 8000 marks. There is a fear that the property of the settlers in the northern part of the country, where land is as easily obtainable as in the uncolonised districts of the United States, and also as easily given up, might not be sufficiently good security. The managers and directors have declared that according to their experience it is possible to fix a lower limit without any risk whatever.

The Mortgage Bank for the towns, *Städernas i Finland Hypothekskassa*, was established in 1895, and has now a share capital of 3 million marks, with a reserve of about one-third of a million. It is a bank where, unlike the *Hypotheksforeningen*, there is no joint responsibility on the part of the borrowers. Professor A. Kihlman is the chairman; and, in succession to Herr Aug. Ramsay, who was appointed chief of the Division of Commerce and Industry in the Senate, it has as manager ex-Senator Serlachius. At the end of 1900 it had issued bonds for a total amount of 30½ millions, bearing interest at 4 per cent., the price being 99. The mass of its loans are for long periods on amortisation and are not granted on more than one-half of the value. Most of them, 26½ millions in all, are held in Helsingfors. It has recently paid to the shareholders a 6 per cent. dividend.

The above-mentioned law of 1886, which permits the banks to issue bonds or debentures on security of mortgages or bonds of governments and of municipalities and under government control, had at the end of 1899 been taken advantage of by the Union Bank and the Joint-Stock Bank of the North, the total of their issues being 23 millions.

Finland has not yet any Exchange. There are only periodical sales of securities. It must not be forgotten how new this whole development is. More frequent sales of securities are wanted.

The savings banks have also made progress, although by no means to the same extent as the banks. They are established either by private people or municipalities and communes, and by the law of 1895 are subject to the control of a savings-bank inspector. In 1880 they numbered 109, with 36,000 accounts and a capital of $14\frac{1}{2}$ millions. At the end of 1899 there were 188 savings banks, with 133,000 books, and 72 million deposits. The average in 1880 was 396 marks per book; in 1899 it was 542 marks. In the country the deposits amount to $20\frac{1}{2}$ millions; in the cities to $51\frac{1}{2}$ millions. The deposits were less in number and of less amount in the so-called Old Finland, formerly the Russian part, and were greatest in the south-western part of the country, where the savings bank of Åbo, for instance, established in 1823, has 15 million marks of deposits. In one single härad one out of every nine persons has money deposited in the savings bank; for the whole country the number is one in twenty. The savings bank of Helsingfors has $8\frac{1}{2}$ million marks of deposits. The reserve of all the savings banks amounts to $8\frac{3}{4}$ millions, or 12 per cent. of the deposits. Half the capital is lent out on mortgage on real estate, 34 per cent. against other guarantees, 11 per cent. deposited in the banks or placed in saleable bonds, and 2 per cent. held as cash. Interest varies from 5.45 per cent. paid by borrowers in Nyland, to 5.97 paid in the distant Kuopio. In one year, 1899, the average interest over the whole country increased from 5.56 to 5.68. The interest paid to the depositors was increased from 4.39 to 4.60, less than the average

increase in the rate of interest for the same time. The amount of the deposits increased in 1898 by 13 per cent.; in 1899, when the general progress was less, by $5\frac{1}{2}$ per cent. It increased most in those districts where the highest interest is paid by the savings banks, the increase being as much as 20 per cent. where the bank paid 5 per cent.; but it was $39\frac{1}{2}$ per cent. at the same savings banks in 1898, and about 50 per cent. in 1897. Where interest is low there is a natural preference for depositing money in the common banks. The post-office savings banks, which were introduced in 1886, are comparatively little used; at the end of 1899 they contained $2\frac{1}{2}$ million deposits, against $1\frac{1}{2}$ million in 1898, and 1 million at the end of 1897.

A peculiarly Finnish institution are the warehouses which it has been found necessary to establish in a great number of parishes to supply the people with grain during the winter and the spring. Their existence in about 400 parishes dates from a decision of the Swedish Diet in 1756. At the end of 1898, according to their books, they held 364,000 hectolitres of rye, 225,000 hectolitres of barley, and 260,000 hectolitres of oats, of which two-thirds at that time were in the warehouses and one-third lent out. They had a reserve of cash of about three-quarters of a million marks, and the total capital of these institutions, including funds formed by their means, was about 7 million marks.

Insurance in Finland is arranged on the same lines as in other countries which are in the same stage of civilisation. Foreign companies, especially Swedish, carry on business by the side of the Finnish companies; and some of the Finnish companies do business in other countries, though to a less extent. For some time they seemed to succeed, but of late

the political situation has lessened their credit in other countries.

Among the fire insurance companies the Fennia has 4 millions share capital and three-quarters of a million reserve, and the Pohjola has 5 millions capital and a quarter of a million reserve. At the end of 1898 the latter had 418 million marks' worth of insurances, of which 317 millions were in Finland. To this must be added estimated insurances of foreign companies worth 220 millions (Swedish companies over 151, English over 68), making a total of 537 millions. The amount of insurance during the year 1900 increased by 76 millions. Russian insurance companies, unlike Finnish and other foreign companies, are not obliged to issue any report. The amount of their insurance policies is calculated at 170 millions. This gives a grand total of 707 millions. Among the mutual benefit societies, the Society of the Country has 114 millions in policies. The Society of the Cities, with Dr. Axel Lille as manager, has 302 millions. There are several other considerable associations for the provinces, for the saw-mill owners, for country merchants, for personal estate (which latter has policies to the value of 55 millions), the total policies being worth 620 millions. Detailed reports exist of the old insurance policies in the hundreds and the parishes, where the premiums were a kind of tax to be paid when the householder was not insured elsewhere. They were estimated at 350 millions. The grand total for all fire insurance is calculated at 1676 million marks.

A new Finnish company, the Osmo, with a capital of half a million marks, does business in reinsurance.

For insurance of transport and maritime insurance there exist two Finnish companies, the best known

being the Sea Insurance Company, with Herr Uno Kurtén as manager, and a capital of 2 million marks; and two mutual associations; but the largest business in this department is done by foreigners. A small Finnish company insures glass, and two Finnish companies insure horses and cattle. The one in Åbo for the insurance of horses has $3\frac{1}{2}$ million marks of policies, and there is a general company for Finland with $4\frac{1}{2}$ million policies. Foreign companies insure against theft.

With regard to insurance against personal accidents, we have already mentioned the new law of 1895, enforcing a general insurance of workmen for this purpose. There are two Finnish companies for voluntary insurance; the Patria, whose manager is Herr Axel Lille, and the Kullervo, each with half a million marks of capital, besides reserves. There are also three Russian and one Swiss company doing business. The six mutual assurance societies formed by various manufacturers have fewer expenses than the public companies, their cost varying from 4 to 13 per cent., the smaller cost attaching to the association of the saw-mill owners, which is the largest society. The expenses of the companies vary from $22\frac{1}{2}$ per cent. in the Patria to $28\frac{1}{2}$ per cent. in the Internationale Unfalls-Versicherungsgesellschaft. At the end of 1899 about a thousand firms had insured 50,000 workmen against accidents incapacitating them for long periods and against death, and 17,000 workmen against minor accidents.

Among life insurance companies two are Finnish companies; the Kaleva, whose manager is Herr Uno Kurtén, and the Suomi, whose manager is Herr E. Kaslin, with 2 millions and half a million capital respectively, besides reserves. In 1899 they had 114

million marks' worth of insurance policies in Finland, and 120 millions in other countries. Their insurance fund was 17 million marks, and their books show a decrease in business in other countries. The total amount of insurance policies in Finland in 1895 was worth 105 million marks. The Finnish companies have 56 per cent. of the business; and nineteen foreign, mainly Swedish, companies have the balance of the reported business between them. The Russian companies are here, too, not bound to furnish reports. The life insurance was only 78 marks per head of the total population, and only 40,000 persons were insured; that is to say, it is still only the middle-class who insure their lives. The amounts per head are, however, decreasing, which shows that life insurance is becoming more popular. Life insurance is controlled by a Government Inspector, but no such supervision is yet introduced for fire insurance. Altogether, insurance business is increasing, although not yet so well developed as is the banking system.

CHAPTER IX

MEANS OF COMMUNICATION

THE oldest means of communication in Finland and other parts of Western Europe are the waterways; in Finland, not only the sea with its broken-up coasts, giving communication with the great world, but also the lakes and rivers in the interior. The character of this country, "the last-born daughter of the sea," with its great lake-systems in the interior, and the land only sloping down near the coast, has made it possible for these great inland seas to be utilised for navigation. It was along the waterways that communication first took place; and these are still to-day the great means of communication everywhere, especially in the north during the summer, when there is no winter snow for the sleighs. In the far north they are still the only routes existing, and it is over them that a considerable part of the people travel to the large fisheries on the coasts of the Polar Sea and the White Sea. In the south, too, boats and small steamers ply everywhere, among the islands of the coast as well as on the large inland lakes, which have the same character as the coasts, and afford excellent means of communication during the summer.

The great hindrance to navigation was formerly the rapids, to which we have referred, and which are very numerous in many of the rivers. The people, however, soon learned to overcome this difficulty; places were found where the boats could be drawn overland, and

experience taught the art of travelling on streams where it was dangerous for less expert men to sail. To-day the navigation here is of great importance, especially in the north; and the tar boats, which are the main means of communication on the Uleå, are one example of this river-communication. These with their sworn pilots continue to be the regular means of communication, and for strangers it is a great attraction to travel in this novel manner.

Work was undertaken in early days to overcome the difficulties on the streams; and in modern times the great canals have been among the most important means of opening up the country and increasing the value of the forest and land. The present increase of communication on these lakes gives some idea of the importance of the work. The Saima lake district, in which the waterfalls on the Vuoksi formerly hindered all access from the sea, is the largest of its kind in Europe, covering 64,000 square kilometres, or one-sixth of the whole of Finland, in a district where one-fifth of the population live. Ships from other countries can now penetrate by these lakes 400 kilometres into the country. The two other lake-systems farther to the west, the Päijänne and Näsijärvi, have not the same area, but are of importance. At the end of the fifteenth century, Erik Thureson Bjelke, who commanded the forts of Viborg on the sea, and of Nyslott between the lakes, tried to open an outlet here. The idea was taken up a century later by General Pontus de la Gardie, a French emigré, and some years later by Charles XI. It has now been carried through under the direction of the Swedish Lieutenant-Colonel Baron Nils Ericsson, brother to the well-known inventor and engineer, John Ericsson, who designed the *Monitor* and invented the screw. At a cost of 12½ million marks

a canal was built from Lake Saima to Viborg in 1844-56, with twenty-eight locks, and a total length of 59 kilometres, of which 32 have been dug out of the earth. The canal is now used by more than 5,000 ships every year, and once yielded a revenue of 500,000 marks a year; but after the tariff had been decreased in 1893 the revenue fell to about 300,000 marks. Some time earlier, water-routes 300 kilometres long were established on the Saima system from Villmanstrand in the south to Iisalmi in the north. About 3½ million marks have been spent on canal works in the interior; and finally 2 million marks on making a canal from Nyslott to the north-east, and from the Pielis, the outlet from the great Pielisjärvi lake-system. In other places half a million marks have been expended, and another 300,000 on the Vuoksi itself. In all, 19 millions have been spent on the Saima system. Later, work has been done at Päijänne, and in the interior of Savolaks and at the outlet of the Kymmene, the cost of this being one-third of a million; and finally, half a million has been spent on the Näsijärvi system and over half a million on the rivers of Ostrobothnia, including some work on the Uleå River. The total amount expended on canals is about 25 million marks.

In former times most of the lumber was exported from Ostrobothnia; and when the export became considerable the greater part of the wood was gathered together on the lake-systems of Näsijärvi and Saima to be exported, in one case *via* Björneborg at the mouth of the river Kumo, which is the outlet for the Näsijärvi lake-system, and from Saima (when the Saima Canal was finished in 1856) it was taken *via* Viborg. In the years 1865-69, more than 38 per cent. of the total export took place over Viborg, and

about 14 per cent. over Björneborg. It was only in the seventies that floating began on the Päijänne and its outlet, the Kymmene; and it was at this time that Kotka became a town and soon afterwards the leading export place for timber. In 1877 a custom-house was established, but already in 1880 Kotka exported more than Björneborg, and in 1881 more than Viborg. In 1894 Kotka exported 20 per cent. of the timber, Viborg 17 per cent., and Björneborg, which had advanced to 19 in the latter part of the seventies, fell again to 14 per cent. The fourth place is now held by Åbo. On the whole, it is still from Southern Finland that the great export comes. The North has the greatest mass of forests, but has only recently begun to take any considerable share in the timber trade.

Floating on the great water-courses is the chief method of timber transport. On the Kymmene and Kumo Rivers alone more than 4 million logs per year are now floated. The associations of the saw-mill owners have accomplished much; among other things, they have expended about 900,000 marks on the Kymmene. The result is that it now costs 13 penni per log instead of 47 penni, as in 1877, to carry the logs from Päijänne to Kotka; while on the Kumo the cost is 38-45 penni per log from the rolling trams at Tammerfors out to Björneborg. At Viborg only 3 to 4 per cent. of the lumber from the Saima system is sawn; the mass is dealt with on mills at the lakes and carried by railroad or on boats through the canal; but in the interior considerable masses are floated out to the larger lakes. For instance about 1 million logs and 600,000 pieces for the pulp mills are floated through the Laitasalmi at Nyslott, and it costs now only 30-40 penni from Joensuu to Villmanstrand

instead of double, as formerly. In the east, too, the floating is important, as, for instance, on the Jänisjärvi water-course to Ladoga; and for the sake of the Crown forests it would be desirable to improve the floating on Uuksunjoki still farther east. On the lakes, the floating takes place in large loose masses confined in a framework of logs bound together, which are moved by windlasses. On the larger lakes, where great masses are collected, they are towed down by steam-tugs or by pontoons with steam-windlasses. The transport across the lakes costs little, and the floating of loose logs in the river is not expensive; but the rafts, which it is necessary to use in the outlets of the rivers, cost more. The floating business clashes here with fishery rights, which are now, however, of very little value compared with the transport of lumber, even where, as in the rivers Torneå and Kemi, they yield 40,000 and 100,000 marks a year. The restriction of floating to a short time during the year on account of the fisheries is a great loss of money, because the logs for this reason have to be two or three years under way. As soon as it is known that the floating will take more than a year, the bark is taken off the firs, as it is always taken off the pines. Considerable loss is caused by the sinking of the logs.

Farther down the country the floating is now as a rule well arranged, although here, too, much remains to be done. A large part of the work undertaken by the government has been for the purpose of hindering the floods, as for instance those on the Kumo and the rivers in Southern Ostrobothnia. In the north the government has a large direct interest in floating, because of its enormous forest property. It would now pay to carry out some large works even on the great rivers running out into the Polar Sea, the Teno-

joki and Paatsjoki, on which a large mass of the lumber which will soon be cut down in the Enare Lapmark may be floated, as well as on several water-courses on the eastern frontier, which are affluents of other rivers running out partly into the Polar Sea and partly into the White Sea. Also as regards the Torneå and its affluents, complaints are made of the expense, often more than 1 mark per log, which might be reduced by more than a third, notably by arranging the floating of loose logs. On its affluent, the Tenkeliö, over 5 marks each has been paid for thousands of trunks, or more than they cost in the forest. On the Torneå half a million logs per year are now floated, and in the Kemi and its affluent, the Ounasjoki, more than a million. From the upper parts of these rivers, as well as of the Ijo, Uleå, and other northern rivers, hundreds of thousands of logs are floated at one mark and two marks each, or even more. On the Uleå, the Uleåborg Saw-Mill Company has acquired an actual monopoly, and it is not the only instance where single companies or associations have been able to obtain such a privilege, to the loss of other people and of the government itself as proprietor of the forests. The government ought to undertake a series of works on these northern rivers, as has been recommended by the committee of the government forests.

Finland has 3700 kilometres of coast. It is therefore only natural that the country should expend a considerable amount on lighthouses, buoys, and beacons, as well as on pilots. In all more than a million marks per annum is spent, besides extraordinary expenses. About 1100 men are employed as pilots. It is of great importance to maintain the navigation during the winter from Åbo and Hangö to Sweden, as well as to other countries, and a good case for subventions is

thought to exist, not only for the sake of the mails, but also for the export, especially of butter, to England. By means of two powerful ice-breakers, bought for 700,000 and 1½ million marks, it is now possible to keep Hangö open the whole winter, while another ice-breaker accomplishes the same work at Åbo.

The old Swedish provincial laws made it the duty of the landholders of the villages to build bridges or to keep ferries, as well as to open up roads which were of importance to the whole country or to the härad, the parishes, the mills, or finally to their own cattle. They had to contribute according to the value of their land. In a country so thinly populated and of such large extent as Finland the only roads were, however, for a long time the waterways during the summer and the snow during the winter. Parliaments and all other public assemblies were always held near the sea. Even in the south public messages were sent during the winter by runners on Scandinavian snowshoes or "ski." Later on, high roads were made which, like the railways in modern times, followed the long terminal moraines which, on account of their regular character and stony ground, were easily transformed into roads. In the middle of the sixteenth century about 2000 kilometres of roads were perhaps in existence, but owing to the subsequent wars it was a long time before others were constructed. Even in the beginning of the nineteenth century the country only had about 10,000 kilometres of roads. Distant districts had often nothing but horse paths as a means of communication with the outer world, and on the lakes and rivers communication by boat is still often used instead of by road. The people moved, and move sometimes still in the far interior, in the same manner as the Indians in Western America, where

they carry their goods by means of two connected poles drawn along the ground by a horse.

In recent times the construction of roads has been carried on in the same manner as other public work in Finland, at once with great energy and careful financing. There are now about 44,000 kilometres of roads, 25,000 kilometres of highroads, and 19,000 of by-ways. This is an average of about 17 kilometres per 1000 inhabitants. The State has maintained the old obligation of the landholders to construct roads, but has assisted them where it was necessary to undertake larger works in the public interest, especially in bad years when the people had need of work. The State has itself made roads in the Lapmark, where the sparse population could not do it, and where also the Crown owns the largest part of the country. It has been possible to make good roads with the gravel and brash which are so common in the country and which equal the macadamised pavements of other countries. The work of the men and horses evidently does not cost much, since the expense of the highroads is reckoned at 6000 marks and of the by-ways at 3000 marks per kilometre, and the whole initial cost is about 220 million marks with a yearly cost of between $3\frac{1}{2}$ million and 4 million marks.

Railways were only first decided upon after the Crimean War in 1856, when Alexander II. had become Emperor and visited Finland. Colonel Alfred Stjernvall had earlier proposed a horse tramway to connect Helsingfors with the lakes in Tavastland. Herr J. V. Snellman, the great patriot and popular leader, adopted the idea, and the plan of a railway between Helsingfors and Tavastehus was thereupon drawn up by Colonel Knut Stjernvall, who later entered the service of Russia and became Inspector-General of the Russian

Railways. This railway was constructed in 1857-62, its length being 110 kilometres with the Russian gauge of 1.524 metre; but instead of the calculated cost of 88,000 marks per kilometre the cost was 14½ millions, or 131,000 marks per kilometre. No one yet understood how to construct a railway cheaply, and instead of obtaining a net revenue of 6 per cent. it did not even pay its working expenses. The period of liberalism had come, however, and the political leaders of the country were not afraid to go on. In 1867 the Diet voted a loan of 18 million marks for a line connecting this railway with St. Petersburg. Part of the railroad would pass Russian ground, and the whole was of considerable interest to St. Petersburg. The Emperor Alexander wanted to maintain the Russian gauge in opposition to the Finlander engineers, and in order to facilitate the work he granted a Russian State-loan of 10 million marks against one-third of the net revenue. This sum has lately been refunded to Russia. The line from Riihimäki to St. Petersburg was constructed very cheaply; it followed the moraine of Salpausselkä, by which much work was saved. The line ran near the lake of Päijänne and by a short connection to Saima. Its length was 382 kilometres, and its cost only 74,000 marks per kilometre; less than the estimated price. It was finished in 1870; but had to be reconstructed and extended in certain parts; so that the whole line between Helsingfors, Tavastehus, and St. Petersburg, with branches to the two other lake-systems, which had originally cost 42 million marks, now reached a total length of 519 kilometres and a total cost of 67 million marks, or 129,000 marks per kilometre. It began by paying from 3 to 4 per cent., and now pays 6½ per cent.

In the speculative period after the Franco-German war the possibility was discussed in Finland of constructing railways as private enterprises. The government proposed to the Diet to sell their railways to a private company. The proposition was not accepted, but private concessions were granted for railways to Hangö, Borgå, and Åbo. The last was not constructed, but the holders of the concessions for the lines Hyvinge-Hangö and Borgå-Kervo built railways and failed. The railroad to Hangö was then sold to the government for about $10\frac{1}{2}$ million marks, or 70,000 marks per kilometre through a length of 150 kilometres. The Borgå railway was transferred to a new company. In 1874-76 the government itself built the Åbo-Tavastehus-Tammerfors line, 211 kilometres, for $19\frac{1}{2}$ million marks, or 92,000 marks per kilometre. It is only in recent times that some small private lines have once more been built.

As in other countries, public opinion was divided on the question whether the railways ought to be built first in those parts of the country which most need developing; or, on the contrary, in those which are the richest and best populated. The intermediate course was chosen: to begin in Southern Finland, but to let the first lines pass the interior of the south, where it would cost less to build and whence connections could later be made with the ports. It would certainly have been more advantageous to begin connecting the towns on the coast, notwithstanding the larger expenses here where the lines could not follow the ridges of gravel and brash—the terminal moraines already mentioned. Such lines would have been more used and, in consequence, would have paid better. This last view was strongly advocated by Herr Theodore Tallqvist in Finland, and although his ideas have not

been entirely victorious, they undoubtedly had a favourable influence on the later plans for constructing railways. Probably it would still pay for the Finnish government itself to build a line along the whole coast.

In 1877 it was decided both to continue the railway-making and to construct the lines very cheaply. For this reason a speed of 25 kilometres an hour and rails weighing only 22.3 kilograms per metre were considered sufficient. This price is not much more than the cheap roads on the American prairies—\$15,000 per English mile, or $1\frac{2}{3}$ kilometres. It was, however, soon found necessary to employ heavier locomotives, and heavier rails weighing 25 to 30 kilograms per metre, as well as to run trains at 30 kilometres an hour.

Later, a series of lines was constructed in Ostrobothnia (the present provinces of Vasa and Uleåborg) and in Savolaks, these lines costing from 50,000 to 60,000 marks per kilometre, or as much as 70,000 marks in Carelia and 83,000 on to Björneborg. There was a cheaper line in the interior from Jyväskylä to Suolahti costing 68,000 marks, and finally a more expensive more direct line to Åbo, while at the same time a line was constructed in the interior from Kuopio to Iisalmi, and another in the north from Uleåborg to Torneå is under construction. During the last decade 5 to 7 million marks per annum have been spent on railways. In the present interval between two Diets (four years) the Estates wanted to use a much larger amount, and voted for this purpose a loan of 35 million marks, but the government has decreased the sum to 25 millions.

At the end of 1899 the government railways had a total length of 2651 kilometres built for a total cost

of 250,780,000 marks, or about 94,000 marks per kilometre. Half of this amount was procured by loans, half paid out of the current revenue. This is an average of 0.7 kilometre per 100 square kilometres, that is to say, about the same proportion as in Russia; where, however, the largest portion of the railways is located much farther south. It is more than in Norway, but only one-third of the proportionate railway mileage in Sweden, and of course much less than in the other more advanced and better populated countries, among which Belgium, for example, has as much as one kilometre of railway lines in less than 6 square kilometres. In proportion to the number of inhabitants, there are in Finland 10.4 kilometres per thousand inhabitants. This is about equal to Denmark, France, and Germany. Only Sweden has much more—about double the proportionate railway mileage of Finland. The proportion is inferior in Norway, as well as in countries such as Great Britain and Belgium. The proportion is much less in Russia, although here, too, the population is rather scanty in the greater part of the country.

Of private railroads there are now about 200 kilometres, the most important being branch lines from some of the lesser towns on the coast to the government lines, with the same gauge as these. There are also one or two short, less expensive, narrow-gauge lines to some of the large works and factories. Such roads will probably continue to be constructed as private enterprises, but the government ought to build more along the coast in the populous part of the country.

The passenger and goods traffic varies in volume. While the northern part of the Carelian line has only 14,000 kilometres of journeys per annum, the line from St. Petersburg to the summer resorts has 1½ million. Among the more important lines the proportion varies

from 23,000 on the Uleåborg line, and 25,000 on the Hangö line, to 66,000 on the Åbo line, and 173,000 on the Helsingfors-Tavastehus line. As always, the larger volume of traffic is nearest the towns.

The goods traffic varies in the same manner, being as much as 313,000 kilometre-tons near St. Petersburg, 307,000 near Helsingfors, and only 10,000 to 14,000 on the lines Björneborg and Uleåborg, 31,000 in Savolaks, 32,000 in Carelia, 35,000 in Vasa, 57,000 on the Hangö line, and, finally, 103,000 on the Åbo line, and 170,000 on the whole Helsingfors-Tavastehus-St. Petersburg line. Most of the goods traffic goes to the ports, since Finland, as we have said, is exporting much heavier goods than it imports. On the Hangö line butter forms about half of the whole of the goods traffic; and throughout the whole country lumber represents half of the total.

Interesting experiences have followed decreases in the fares. A lowering of the tariff of 1886 at once produced a good result, and it was therefore continued. The third-class passenger fares have been decreased by 20 per cent., the second-class by 17, the first by 10 per cent. At the same time a rebate of 5 per cent. per 100 kilometres is given for longer journeys, and circular and return tickets have been introduced, with the result that a third-class return ticket for 1000 kilometres, for instance, is reduced by 46 per cent. Also the goods tariff has been decreased. The result has been, as in Hungary when the zone tariff was introduced, a considerable increase in the use of the railroads, and also a largely increased gross revenue. The passenger traffic increased during the period 1896-8 from 7,194,000 marks to 8,977,000; the goods traffic from 10,483,000 to 12,776,000 marks. The increase was so considerable that there was not sufficient

rolling-stock to carry it. Expenses increased in the period 1895-8 from 10,120,000 marks to 14,386,000 marks; the gross revenue from 15,456,000 to 22,004,000 marks; or 42 per cent. in both cases. If, however, we compare 1896 and 1898, the revenue increased only 23 per cent. against 34 per cent. increase in the expenses. For 1899 we have, however, again 25 million gross revenue and 17½ million expenses. It is, of course, in the public interest that communication should be facilitated even if the government does not gain by it, so long as it does not actually lose money. The railways are of especially great importance for national industry, because the goods traffic in Finland, as in the United States, holds a much more important place compared to the passenger traffic than is the case in manufacturing countries, where there is not so great a mass of raw products to transport to the ports.

The net revenue of the lines varies. It was said that it decreased during certain periods in consequence of the extension; but it would be more correct to say that this was a result of construction in more distant parts of the country. Another influence is, however, exercised by the above-mentioned periodical fluctuations in all kinds of business. In 1870 the net revenue per kilometre was 1700 marks; in 1880 it was 3101 marks; in 1895 it was only 2300 marks; and in 1897, when the cheaper tariff was introduced after May 1, it was 3000 marks. One year after the construction of the line to St. Petersburg hardly 2 per cent. was paid on the expended capital; in 1874, a good year, it was over 4; but in 1878 it was only 1.7. Again in 1882 it was nearly 4, but after the construction of the Vasa line, it was less than 3; in 1883 3.6; after the addition of the Uleåborg line in 1886-7

only $2\frac{1}{2}$; again 3.3; in 1892, after a bad harvest, it was down to $2\frac{1}{2}$; in 1896-7 again 3.6. Thereafter there was great progress, but at the end of 1900 the progress ceased.

It is an important argument for the construction and working of railways by the government that the same net income can be produced in different ways. A greater traffic with larger expenses is evidently advantageous to the people if only the net income does not decrease. In enterprises such as railways there is always a large amount of public profit which does not appear in the interest on the capital or as individual profit. It is impossible to arrange a tariff to pay for all the advantages obtained; in the case of some persons the advantage does not much exceed what they pay, while it becomes much more considerable in other cases. This is not peculiar to railways; it is more or less the case in all economical enterprises. The existence of much good service which is not paid for is, however, more prominent in an enterprise such as a railway, where as a rule there is no great equalising of prices brought about by a number of competitors. The railway has always more or less a monopoly, because a considerable profit is necessary before it becomes practicable, even where there is no hindrance through legislation, to construct a competing line alongside the one first constructed. In its character of a monopoly the railway is always to some extent arbitrary, the working and the tariff being arranged for the sake of private profit, whether the net profit is obtained by more or less gross profit. This character of a natural monopoly renders it very necessary that some public authority should have control over the railway, and that it should at least settle the tariff even if it does not itself construct and work the line.

The question whether, in a country like Finland, the government ought to build the larger lines or not, was decided by the simple fact that the capital could not possibly be obtained in any other manner, or at least not so cheaply as by the credit of the State. And Finland had a class of officials capable and honest enough to carry through such an enterprise. Common sense, therefore, determined the action of the government in this case.

To turn now to the postal system. Its earliest beginning may be said to have been the "budkafle" ("budstikke" in Danish-Norwegian), a stick with signs on it by which the words of the king, as well as messages about acts of violence, were sent round to the villages and towns. If the stick was burned at one end and tied with a string at the other it told of an attack by the enemy. The police ordinance for the villages as late as 1742 contained detailed rules for the despatch of this post, and it may still be used in the case of a great forest fire. The first real post was organised by the Swedes, who in the Thirty Years' War had seen a post organised in Germany by the family of Taxis. This family, as will be remembered, was at the head of the German post until quite recent times, when it was seen that United Germany was able to take better care of its post than a great number of independent princes could do. German experience suggested the organisation carried out in Sweden in 1636, which was at first connected with the publication of an official journal, *Tidningar och Avisor*, this journal being still continued under the name of *Post- och Inrikestidningar*. The peasant farmers who were obliged to carry the post got a reduction in their taxes. During the winter the post was regularly carried round the Gulf of Bothnia.

Modern postal reform—that is, a uniform tariff according to the system of Rowland Hill—was tried for three years, beginning in 1844 as an experiment with letters in Finland and to St. Petersburg, the charge being 10 kopeks per Russian ounce for small letters and 20 for larger sizes. From 1850 the tariff in Finland was 5 kopeks for 125 versts (144 kilometres) and 10 kopeks for longer distances. Stamps were only introduced in 1856 as an experiment for two years, and were finally adopted in 1857, at the same time that they were introduced into Russia. Letter-boxes were also introduced then. In the sixties the whole modern postal system was in force.

The increase of postal matter has been considerable, as in most other countries, growing from 8½ millions in 1881 to 31 millions in 1897. In ten years, 1891–1900, the increase was 125 per cent., the largest increase being in wrappers, parcels, and postal cards. There was also a considerable increase in letters and newspapers, the smallest increase being in free official communications. Letters and postal cards increased in the period 1888–97 from 2.4 to 5.2 per head, and all postal matter from 6.3 to 12.3 per head. The net profit made by the government, besides free official communication, was in 1897 one-third, in 1898 half a million marks.

In 1890 the transfer of the post to the Russian Minister of the Interior and the Russian Direction of Posts and Telegraphs was decreed, notwithstanding the fact that this was contrary to the constitution of Finland. Finland has still really its own post, but modern reforms have been stopped. Especially an excessive tariff of 20 and 50 penni is maintained for letters and postal orders, and when the Diet asked for a decrease the Emperor answered, according to the

recommendation of the Governor-General, that he would not allow Finland to decrease its tariff as long as Russia could not decrease her tariff! The wizenng hand is laid on this department of the administration. Recently the introduction of Russian stamps was the occasion of a considerable commotion in Finland, although it was so arranged that Finland still keeps her own postal revenue.

Just as the peasants were obliged to carry messages and, later, the post, so they had also to furnish horses to travellers. Peasants who were under this obligation, and also kept inns for the travellers, had their taxes reduced. For a long time the pay was very low, and the obligation was regarded as a heavy burden, which was transferred in regular order from one farmer to another. Now the pay is somewhat higher. After the construction of the railways the postal roads were less used, and where there is much traffic the horsing of travellers is most often undertaken by private persons under an arrangement with the government.

The old "optical" telegraph from Sweden to Finland was established at the end of the eighteenth century for military defence. It was re-established by the Russian Government during the Crimean War; and in 1854, when its defects became manifest, the Emperor Nicholas ordered the Russian Minister of Communications to arrange an electric telegraph between St. Petersburg and Helsingfors. This was at once taken in hand by the Berlin house of Siemens and Halske. It was only after the war that the telegraph was open to the public. In 1856 telegraphing to other countries in German was permitted; and in 1858, after the cities of Helsingfors, Åbo, and Viborg had declared their willingness to contribute, telegraph-

ing on the line St. Petersburg-Åbo-Helsingfors was permitted in Swedish. As neither the Russian Telegraph Direction nor the Finnish Senate would incur new expenses, a private company proposed to take over the telegraph, but as this proposition was not approved, the Emperor Alexander finally allowed the establishment of a line to Torneå on condition that the towns contributed to the expense. The demand of the Diet in 1863 for a public or private telegraph system for Finland was rejected, but was the occasion of a decrease in the tariff. Progress came later from participation in the general European telegraph conferences, and cables to Sweden have been laid by the Great Northern Telegraph Company. In 1899 there were 4900 kilometres of lines, and in 1898 about 2 million telegrams passed over them, of which, however, less than 400,000 were inland messages, and less than 200,000 came from other countries to Finland, whilst about $1\frac{1}{2}$ million passed the lines *en route* to other countries. The telegraph tariff is in several respects too high, and in the whole country there are only sixty-six telegraph offices. Legally, the position of the Russian telegraph in Finland is about the same as that of a private company, just as the railway owned by the Finnish Government on Russian soil has about the same position in Russia as a Russian private railway.

Finland has its own telegraph along the railways. At the end of 1898 there were about 4400 kilometres with 204 offices.

Possibly it is a consequence of the Russian telegraph restrictions, or more possibly an expression of the vigour with which the Finlanders have recently kept pace with modern progress, that the telephone has come into use in the most extraordinary manner

in Finland, even more remarkably than in Sweden and Norway. This has chiefly been possible because no patents or monopolies have hindered its development. The Senate gives concessions to companies as well as to private persons. A Swedish company decided in 1880 to introduce a telephone with American instruments into Helsingfors, but it was only in the summer of 1882 that the necessary hundred subscribers joined, and a beginning could really take place. A telephone was already installed in Åbo with Swedish Ericsson instruments, and only thirty subscribers. The telephone is now found everywhere, even in the country; in 1898 there were 300 centrals. A company for connecting the towns in southern Finland was established in 1894, and introduced everywhere double wires between the towns, on lines which, at the end of 1898, extended over 4700 kilometres. Other companies have been formed for connecting the towns in other parts of the country. The telephone is very cheap; it costs ten marks per annum in Mariehamn on Åland, where there is a telephone for every nine persons, and 20 marks in Nykarleby; elsewhere it varies from 30 to 75 marks, though in Helsingfors it costs 60 and 102 marks, and in Viborg 85 and 100 marks. The use of the telephone has entered thoroughly into the daily life of the people, and it now holds an important place in the economic as well as in the social and intellectual existence of the nation.

CHAPTER X

THE EXCHEQUER AND CIVIC DUTIES

IN no country in Europe is the financial situation better than in Finland. The country is not burdened by very heavy taxes, all public departments are well taken care of, and there is a good balance on the budget. There are also large reserve funds of different kinds, and the Finnish State owns a considerable extent of productive properties worth several times more than the inconsiderable public debt, a debt which has been entirely incurred for productive purposes. Apart from external disturbances, the future of the country is assured. The State economy has been still better than the private; the present situation is good, and the condition of the finances permits all desirable reforms.

Constitutional reasons account for the peculiarly complicated form of Finland's budget. The Sovereign, without the co-operation of the Diet, applies all permanent public revenue to the normal necessities of the State, while the Diet votes other public expenses, for which taxes imposed for a limited period or public loans are necessary. The budget voted by the Estates embraces a period of three, four, or, at the utmost, five years, *i.e.* the interval between the sessions of the Diet, including the first year after a session as well as the year of the next session. Notwithstanding the budget arrangement of separate funds and departments, the estimates made by the Division of Finance of the

Senate and the Committee of Finance (*i.e.* of Ways and Means, Supply and Appropriation), embrace the total revenue and expenses of the State. The decision of the Estates as to the grants which they shall vote is based on the estimate made by this committee of the ordinary revenue and its sufficiency to meet the expenses, while the statement presented by the committee at the end of each Diet contains also a budget for the whole period, giving a perfect insight into the entire financial situation.

Of the budget for the period 1901-4 we give the following averages for each of these years:—

	MARKS.
Total of the ordinary average yearly revenue, therein being comprised the voted taxes, is estimated at	70,273,000
Grants voted for this period alone for railway construction, total 35 million, or per annum	8,750,000
Surplus from the preceding financial period, to be used yearly	4,634,000
Grand total	83,657,000
The ordinary expenses, comprising interest and amortisation of the public debt, were estimated at	57,959,000
Extraordinary expenses, including an estimate for construction of railroads of 22½ million marks, estimated at	25,325,000
Grand total	83,284,000

In this budget the government has made one alteration, that the expenditure on railways should be decreased, and the loan made for this purpose be decreased by 10 million marks. Some minor lines and subventions to other minor lines were not approved of.

Of the ordinary revenue the taxes yield $48\frac{1}{2}$ millions, or 69 per cent.; income of capital and other property, railways, canals, and public enterprises, $20\frac{3}{4}$ millions, or 29.5 per cent.; divers revenue, 1.5 per cent. The most important taxes are the custom duties, estimated at 32 millions, which is a low estimate; thereafter the excise on alcohol, $6\frac{1}{4}$ millions; taxes on land, $3\frac{1}{4}$; personal taxes, 2,100,000; stamp taxes, 1,700,000; malt tax under one million (a rather low estimate); duties on the sawmills, or rather on exported lumber, under half a million; finally, some less considerable taxes, payment for passports, and other minor fees.

Among the revenue derived from Government property and enterprises the surplus of the railroads is the most important, averaging 9,300,000 marks; the gross revenue of the large government forests is estimated very low, at $2\frac{3}{4}$ millions; gross profit on the post, 3,800,000; gross profit on the canals, 525,000; interest-bearing funds, 1,300,000. Of the Bank of Finland's surplus the Diet appropriates 900,000 marks per annum. The gross profit system is correct as concerns the statement of all real public expenses, but it is hardly correct not to deduct the expenses of enterprises in which the government is acting rather as a private trader.

A good impression is created by a study of the public expenses, especially of the large amount applied to further general intellectual and material development. More than one million is put down as reimbursement of public duties, from the custom-house, &c. The superior administration costs about 2 millions, among which may be noted some hundreds of thousands disposed of by the Emperor personally. Hardly $3\frac{1}{2}$ millions are expended by the Department of Justice, including $1\frac{1}{2}$ million for the prisons. Some of the

expenses for the courts, however, pass through the Communes, and not through the State treasury. The financial administration, especially the expenses of the custom-house, demands $2\frac{1}{4}$ millions; the custom-house rather less than in most other countries. The civil administration requires $6\frac{1}{2}$ millions, including over 2 millions for sanitary purposes. Among other special expenses may be noted the large amounts already mentioned as paid for the post and the administration of the forests; to which, as we have suggested, an even larger amount might be applied profitably. Of great interest are the considerable sums paid to the public schools, which together with grants to the Church amount to over 10 millions. Only half a million of this is paid to the Lutheran State Church, which obtains most of its resources from the congregations; and about one million is granted to the University. The balance of the budget for the general Department of Instruction is now about 8 millions, of which 4 millions yearly go to the elementary schools. Manufactures and commerce get over $2\frac{3}{4}$ millions, including half a million for technical schools, of whose expenses the Communes pay the larger part. Agriculture and matters connected with it obtain 3 millions, in which are included grants to agricultural schools, measures in the interest of creameries and dairies, contributions to the economic societies, &c. Relatively moderate sums are applied to military defence and the payment of interest on debt. In most other countries, where the debt is generally the result of old wars, these two items absorb two-thirds of the total State expenses. In Finland the ordinary amount voted for military defence is only $6\frac{1}{2}$ millions; for the debt, including some amortisation, a little more than 6 millions. We may further mention that the State of

Finland is comparatively liberal in pensions to its officials, the sum for which, together with amounts paid in cases of death to widows and children as well as contributions to a fund for these latter, is about 2 millions. Certain of the expenses might be criticised, none more severely than the 100,000 marks expended on the censorship of publications, especially the press. But, on the whole, this budget will bear comparison with those of other countries, both by its good economy and its intelligent liberality.

The total debt of Finland in 1899 was only 115 millions, or about half of what the railways have cost and are worth according to their revenue. Of this 1½ million is the balance of the first loan from Russia in 1859; 2½ millions the balance of the railway loan of 1868 arranged with Erlanger & Sons as premium loan; 38½ millions the balance of a loan of 1889 from Bleichröder and others at 3½ per cent. The debt also includes about 17½ millions at 3½ per cent. borrowed in 1895, and about 55 millions at 3 per cent. (closed in 1898), both borrowed through the Bank of Finland from the Crédit Lyonnais, the Banque de Paris et des Pays-Bas, the Union Bank and the Northern Joint-Stock Bank in Finland, the Stockholms Enskilda Bank, the Danish Landmandsbank, Behrens & Söhne in Hamburg, and the Deutsche Bank and the Dresdner Bank in Berlin. Finally, there is a loan of 25 millions arranged in 1901 at 3½ per cent. with the same banks.

The method of voting supply must be mentioned in order to understand the budget and the accounts. In itself there is not much to say against the exemption of regular revenue from the votes of the Estates. They have influence enough in so far as their consent is required for new demands, this being always necessary.

But, as we have said, there was this weak point in the old Swedish constitution at the end of the eighteenth century, that the government could increase the customs tariff without asking the Estates, so that the whole of this important department was outside their influence. This restriction has been severely felt in modern Finland, and might impair the efficient co-operation of the estates with the government in public affairs. It is chiefly in consequence of historical conditions that the budget is divided into separate funds. The large portion controlled by the Crown only is called the General State Fund. The other portion, which is decided by the co-operation of the Diet, is again divided into three parts—(1) the so-called Voted Fund, consisting of the taxes voted only provisionally, the appropriated part of the profit of the Bank of Finland, and sometimes a contribution from the General State Fund, from which the expenses of the elementary schools and a contribution to military defence are paid; (2) the Military Fund, consisting of the land taxes and rent of land which was used for the old army under the military tenure system, and of sums voted specially by the Diet; (3) the Fund for the Means of Communication; this is not what is called a capitalised fund, or a fund which has its own capital; it is only for the purpose of giving to the railroad construction a financial basis independent of the other parts of the budget or of the economy of the State. Under this fund is included as expenditure the interest and amortisation of the railway loans, and the estimated expenses of construction; and as revenue the net income of the railways, the larger part of the tax on alcohol, and the new loans for railway construction.

The estimate of the ordinary revenues belonging to

the General State Fund, of which the government alone disposes, has always been made with such great caution that during the last few decades the actual revenues have regularly and considerably exceeded the budget estimate. According to a regular practice, the government, as it begins to foresee the real surplus of the year, decides the extraordinary expenses which are needed, as, for instance, public buildings, work on the canals, &c., but considerable sums have also been put aside as separate funds for different purposes. The most important is the General State Reserve, which in 1898 amounted to $7\frac{1}{4}$ million marks, placed in easily saleable foreign bonds. It is destined, in case of war or other misfortunes, to make up possible deficiencies in the revenue. The largest fund, however, is the Loan Fund, amounting to over $16\frac{1}{2}$ millions; it grants loans to be repaid in rates to the Communes, also to shipowners and manufacturers. Among the larger funds are also the "Assistance Fund" of $3\frac{1}{2}$ millions, a special reserve fund to help poor Communes in years of famine. The oldest is the Military Fund of about 10 millions, the interest of which is used for military pensions. Besides these, there are a number of minor funds, such as the Fund for Loans to Dairies, a fund for taking care of orphans and waifs, another to pension teachers in elementary schools, &c. The total amount of these "capitalised funds" was in 1898 about 45 million marks. They are managed by the Treasury Office, which, under the control of the Finance Division of the Senate, places the funds in government bonds, Finnish or foreign, or deposits them in the banks, where, according to the rules for such special funds, the capital may be lent out. When the question arose of retaining these funds, the elder Rothschild was quoted as saying

that "a number of separate funds did not exactly make any man poor." Formerly very large amounts appear to have been standing in very accessible form, especially as deposits in the banks.

Partly by ordinance of 1899, which came into force at the beginning of 1901, and partly at an earlier period, the public finances have been completely centralised. They are separated in the books and not in the Treasury, which contains now the proceeds of the different funds, of which a common cash account is kept. The University has its own cashier, but for the ordinary departments everything not needed for current expenses is paid into the common current account of the general Treasury, and no separate office may from day to day keep more than 50,000 marks. On this common account payment-orders are made by the general Treasury as well as by the provincial governors' offices, these later on sending into the general Treasury specified statements of what they have paid in and taken out. This rule is followed everywhere where a separate account is kept, and if the Bank of Finland has no branch office at a place, the money is paid into a private bank. At all offices, as, for instance, those of the railways, of the post, the University, and the Finnish passport office in St. Petersburg, the cash account is audited at least once a month. By means of this new order, which was in preparation for more than ten years, since 1888, and which is now finally in force, it is believed that a financial organisation has been obtained as good as that of modern constitutional States with their budget and accounts. Statements have to be handed in early enough to be prepared and included in the budget. The budget may not be exceeded without special permission from

the government, that is from the Economic Department of the Senate. The calendar year is reckoned as the financial year, and at the end of the year all accounts of cash and materials are closed. What has not been used in the course of the year cannot be used later, or for other purposes, except where the amount has not been given for certain definite uses, or is expressly reserved for an object not confined to the year; and even in this case it is not allowable to use more than half of what was given for the preceding year. The books must be closed before the following March, and sent in before May for audit. In closing them the budget estimate is strictly followed.

Besides the government funds we may mention a group of local funds established for public use. The total of these at the end of 1898 was not less than $40\frac{1}{2}$ million marks, of which over $24\frac{1}{2}$ millions were in the towns, and less than 16 millions in the country. Funds amounting altogether to 22 millions exist to give assistance of different kinds: 8 millions as a fund for pensions; $7\frac{1}{2}$ for the poor; $2\frac{1}{2}$ for help of a general character; 3 for hospitals and nursing, $1\frac{1}{4}$ for sailors; also funds of more than $2\frac{3}{4}$ millions for Church purposes; a fund of $4\frac{3}{4}$ millions for schools and libraries; $1\frac{1}{2}$ million for scholarships; 3 millions for agriculture; $3\frac{1}{2}$ millions for forestry; and about $1\frac{1}{2}$ million for constructing roads and bridges, establishing gardens, plantations, &c. Besides these funds, there are pension funds amounting to $31\frac{1}{4}$ millions for widows and orphans and for different classes of officials.

It is of interest to record what is known about the assets of the State. Most of the funds we have mentioned show the progress in civilisation of the

country, but have no bearing on the public finances. Besides these funds we have, however, a kind of roll of public properties, drawn up in 1891. It amounted to a total of 207½ million marks, of which 106½ millions were the value of the government forests. According to the prices of the last few years their value is certainly more than double this latter figure. The canals were reckoned at 21 millions, but have a value of at least 25 millions. The farms which belonged to the old army under the military tenure system were valued at 7½ millions; the State property which was formerly a part of the Russian donations at under half a million; agricultural schools more than 1½ million; and the old Crown-lands, properties belonging to the civil administration and fisheries, over 3½ millions. This roll of public properties embraces also public buildings of different kinds, barracks, schoolhouses, hospitals, &c., properties, however, which have hardly anything to do with the public finances. The total assets of a real financial character, domains, capital-funds, railways and canals, can be valued at about 600 millions, against a total debt of 140 millions, including the new loan of 1901 of 25 million marks.

While we admire the excellent economy of the Finnish Government, its forethought, and the sound character of its ordinary public economy as well as of the proportion between debt and capital, we may ask whether there is not some lack of security consequent on the relations with Russia. We do not think that there is the least reason for doubt here. Whatever may be said against the Russian Government and its administration, it must be recognised that the Government in St. Petersburg acts always on the very strictest principle in all questions of finance and credit.

Whether or not this is due to a perception of self-interest, or is a consequence of the great difference in principle which is found in the different parts of the Russian Government, it is a fact which cannot be denied. We are fully convinced that in these matters there will never be the least question of any transgression whatever in relation to Finland. It would be against the whole tradition which the rulers in St. Petersburg have always followed, and which with them has been a point of honour. It would be against all the interests of Russia. In short, it is an entire impossibility. But here, as elsewhere, the authorities in St. Petersburg would give the best guarantee of their *bona fides* if they would more strictly follow the demands of the constitution and the rights of Finland.

For the purpose of obtaining a complete idea of the public burdens and the public resources, it will be necessary to examine the finances of the Communes, in addition to those of the government. The Church in Finland is a separate institution. We have already referred to the considerable extent and not inconsiderable value of the 700 rectories and vicarages of the country. There is not any complete statement of the property and income of the Church in existence. The statistical account of Herr Järvinen, recently published, states only that in 1891 there was paid to the Church in the country $3\frac{1}{2}$ million marks, of which half came from the land, according to the so-called "mantal"; one quarter was from a personal tax under the same conditions as those of the general personal tax to which we shall again refer; and one quarter from a tax on cattle, which are supposed to represent an important part of the resources of country people who do not own land.

Although Communal laws are of recent date,

Communal life is comparatively well-developed, more so than might be supposed from the limited resources of the Communes; a fact due to the old Swedish self-government. The sums collected and expended are the largest in the towns, although they embrace a very small part of the population. They have the largest budget and the largest amount of property and debt, although here, too, it is only a question of relatively small amounts. Their properties were valued at the beginning of 1899 at a total of 59 millions, of which about 27 millions are represented by houses and ground in the towns themselves, 15½ millions by country land, fishery rights, &c., 6½ millions by invested capital, and 10 millions by property of other kinds. In 1891 the total amount was 25½ millions. The total debt at the beginning of 1899 was stated to be 26 millions, against 13 in 1891; of this at the beginning of 1899 Helsingfors claimed about 10 millions, Åbo 3½, Tammerfors about 3, and Viborg 2 millions. The more prosperous towns have the larger debt, in consequence of entering on larger enterprises. The amounts have increased rapidly in later years; Helsingfors, for instance, in 1900 had a debt of 12¾ millions, and in 1901 it was expected to exceed 14 millions as a consequence of large public works. The revenue and expenditure of all the towns together in 1898 was reckoned at 15 millions on each side, against 9 millions in 1890; of which former amount 2 million marks of income came from land and lake and river rights, 3 millions from taxes on trade and industries, and another 3 millions as income-tax. These amounts only increased respectively from 1½ million, 2 millions, and 2½ millions in 1890, but are now increasing more rapidly in some of the towns. The income-tax in Helsingfors, for instance, was estimated for 1901 at 1¼ million, against 1¼ in 1898.

The most considerable expenses are those common to most towns, being in 1898 about 2 millions for schools, 2 millions for police, other sums for sanitary objects, and so forth.

The Communes in the country had in 1898 a revenue not much exceeding $5\frac{1}{2}$ millions, and expenses not much over $5\frac{1}{2}$ millions. This is, on each side, not much more than two marks per head, much less than in other countries. Contrary to the case of all other countries, where the Communal expenses as a rule have increased heavily of late, the increase of expenses and taxes in the Finnish rural communes has hardly followed the increase of population. We have no statement of their property; but their total indebtedness was a little over $4\frac{3}{4}$ millions. In some cases it is doubtful what to assign to the State and what to the Commune, as, for instance, where the State has imposed payment in kind which does not appear in any account. This is the case with the roads, for instance, where three-quarters of a million, paid in cash for work done by contractors, and paid through the Communes chiefly by a tax on land, passed the Communes, treasuries and accounts; but the greater part, according to earlier figures as much as $3\frac{1}{2}$ millions, is paid in labour by the landowners. The schools required in 1898 $1\frac{1}{2}$ million, and the poor-law contribution in 1891 was reckoned at 2 millions, and does not seem to have increased notwithstanding the improvement in the paupers' condition. Half a million was expended in 1898 for sanitary purposes, against one-third of a million in 1891, and for other purposes a less amount. Of the total revenue of $5\frac{1}{2}$ millions, $4\frac{1}{2}$ millions were obtained by taxes in 1898, against $3\frac{1}{2}$ in 1891. In addition $1\frac{1}{2}$ million was raised in 1891 by a kind of income-tax, to which we shall refer later; one million

as land tax; half a million as a poll-tax on grown-up persons; a quarter of a million as another personal tax; 45,000 as a tax on what was known as "rök" ("smoke from the hearth"), on which also some 100,000 marks is paid to the State as a tax on families or on habitations; a small tax yielding 88,000 marks on manufacturing establishments, which goes chiefly to maintain the roads; a small amount as inheritance tax (raised under an old ordinance of 1698, which permits a tax of one-eighth per cent. on inheritances for the benefit of the poor); and in exceptional cases some taxes on cows or other cattle. We quote these details as curious remnants of old taxation. The new law of 1898 extended the income-tax to all members of the Communes as well as the landowners.

If we want to know the total amount and details of the direct taxes, it will be necessary to add the taxes paid to the Church and to the Commune. According to the calculation of Herr Järvinen, the total was about 16 millions, of which 54 per cent. goes to the State, the latter figure including 33 per cent. in direct payment, and more than 20½ per cent. in work on the roads. Of the balance more than 25½ per cent. goes to the Church, of which 21½ per cent. is paid to the clergy and the beadles, and 4 per cent. to the congregations; finally, 21 per cent. goes to the treasuries of the Communes. This is one-third to the government direct, above one-fourth to the Church, above one-fifth to the Communes, and the same to the roads.

As elsewhere, the oldest of the existing direct taxes is the land tax, the unit being the "mantal." According to the signification of the word, the tax was originally imposed as a personal tax on the owners of the land. At present each of the 19,500 "mantal" embraces an average of 5 to 6 farms, as we have

already mentioned. Part of what is paid by the land (in money or work) for the construction of roads and other matters is portioned out on the "mantal"; but the old tax paid to the Crown, the so-called "ordinary rent," is a fixed amount, which the Swedish fundamental laws have promised shall never be changed. This "ordinary rent" is reckoned according to particular units, called rouble taxes. The number of these units for each farm or "hemman" has a definite relation to the "mantal," but not the same in different parts of the country; the survey and mapping-out of the land according to the laws of enclosure has been done and is still going on in different periods; and a valuation of the land for taxation purposes has been made at these intervals according to different methods in the different provinces. A permanent land tax necessarily influences the value of land, and becomes therefore, in fact, a mortgage belonging to the government instead of a real tax. The Finnish legislators seem to have recognised this simple truth better than modern legislators in several other countries. The permanent land tax, the most important of the direct taxes paid to the State, has therefore not been touched. What the landowners pay besides this tax, such as labour for the construction and maintenance of roads, the carrying of the post, and other matters, is estimated at a total value of about 4 million marks. The so-called rents of the Crown, as well as the less valuable Crown tithes (that is, the two-thirds of the old tithes which at the Reformation were given to the State), make, together with other small payments, a total of about $3\frac{1}{2}$ million marks. If we add to this about 2 millions to the Church and one million to the Communes, we have a total land tax of more than 10 million marks, which is not, however, as

surmised by the statistician, Herr Järvinen, 10 per cent. of the net profit of the land, but according to other valuations nearer 5 per cent.

The land tax is still paid partly in kind, or according to periodically estimated prices of grain. This form of payment is antiquated now when everybody is able to sell his products. There is no reason for maintaining this method of payment, and it would be in the interest of the government as well as the taxpayer to fix a permanent money-value. The Diet advocated this reform in 1882, but the Senate refused to adopt it.

Another direct tax is the personal tax paid under the law of 1865, the so-called "mantalspenningar." It yields 2 million marks, the tax being two marks from each man and one from each woman between the ages of 16 and 64 years. The law of 1865, promulgated after the first session of the newly revived Diet of 1863-4, introduced a great improvement on the former excessive and unequal tax. The same tax is levied in the Communes, but begins at 15 years of age, and men and women do not everywhere pay in the same proportion as to the State. This tax has been imposed for the benefit of the poor on all persons able to work, who may presumably themselves some time have need of this assistance. A small contribution to the law courts in the country is a personal tax on the different classes of landholders, with total or partial exemption for poorer holders or tenants who do not own land themselves.

The "centonal," or one per cent. of the salaries and pensions of functionaries, which goes to the military fund, and amounts to 100,000 marks, can hardly be said to be imposed according to any principle of taxation.

A tax of 100 marks paid by traders in the country is undoubtedly very reasonable. John Stuart Mill is right when he says that it is neither in the interest of the traders themselves nor in the public interest that there should be too many places for retail trade. A smaller number are equally useful and expenses are thereby saved. Including a small amount paid by chemists, of whom a limited number only is allowed, this tax brings in half a million a year.

Old duties on special industries, such as the iron-tithe and the hammer-tax, have been abolished; but a tax is still paid by the saw-mills as export duty on their wares, and a similar duty is paid on other forms of lumber. We have already referred to this tax when speaking of the proposals to extend it. It ought to be entirely abolished.

An income-tax to the State, voted by the Diet in 1863-4, and paid during the period 1865-85, is of interest because there has been a proposal to re-introduce the tax. In the beginning the first 500 marks of a man's income was free, and, as the tax was calculated per 100 marks, where the chargeable income was above 500 marks, it was really the first 550 marks which was free. Later, this amount was only free in incomes not exceeding 2500 marks; up to 5000 marks four-fifths per cent. was paid; up to 10,000 marks 1 per cent.; and for incomes exceeding 10,000 marks $1\frac{1}{2}$ per cent. The system was ingenious, but the tax did not bring in nearly enough; during several years it only yielded half a million for the whole country, and even later improvements did not produce any good result. It was not difficult to find out the salary of the officials and other permanent incomes, but the great mass of small incomes were not taxed at all. Experience proved here, as else-

where, what has been recognised by the English law, that it is next to impossible to impose the income-tax on the great mass of the people. Notwithstanding the law, a great number of the peasants were never rated. Too many incomes remained unchanged from one year to another. The taxation was on the whole not strict enough, and not even the officials representing the State fulfilled their duty. Finally, it was changed to a temporary tax, and as it was not necessary for the budget, it was not renewed in 1885.

In the towns, where the income-tax was introduced by the laws of 1873 and 1883, it is more strictly levied than was the tax paid to the State. It is imposed on the sources of income, such as houses, lands, manufactures, and salaries. A person is assessed at so and so many tax-öre, the öre being the old Scandinavian word for a certain coin, but these tax-units differ in the different cities, the larger cities demanding only one tax-öre for each 400 marks, while the lesser towns come down to even 200 marks. Incomes below 2 tax-öre (or 400 to 800 marks) are free; incomes of 3 tax-öre pay half; incomes of 4 tax-öre (*i.e.* 800 to 1600 marks) pay full tax. In most of the towns the tax is 2 per cent. of the income, sometimes 3 per cent.; in some towns, on the other hand, it is only one per cent. It is not just that mortgages should be taxed twice, as is the case, the owner of the property not being allowed to deduct the interest, which is also taxed in the hand of the receiver; nor is it right that stock should pay this tax both in the hands of the owner and of the company. Of $3\frac{3}{4}$ million marks, the amount of the tax in all cities in 1898, Helsingfors alone contributed $1\frac{1}{4}$ million, and in 1901, as we have mentioned, even $1\frac{3}{4}$ million.

According to the law of 1865, the Rural Communes

could to a certain extent impose a similar tax. The laws, however, were not very definite; and very different bases were used: capital or income, the social position of the tax-payer, or revenue from capital or from income, were taken. A law of 1898 has now introduced the same tax as in the cities.

New proposals for the levying of income-tax, the last made by the committee for the drafting of bills in 1898, were founded too much on the Prussian model. The Prussian tax is the result of peculiar conditions, and, both in its origin and its later development, is very faulty. The rulers were afraid, when it was introduced, of a real income-tax; they said so; they would only attempt approximate justice. The later developments have largely been shaped by particular class interests, not least those of the greater rural landowners. In reality, the English practice of looking to the sources of income is much preferable, and in principle a large difference ought to be recognised between the income of capital and the income of labour. If this principle were recognised, and if a sufficient deduction were allowed for the single man or family where the man's income depends on his own exertions, the always arbitrary and objectionable progressive tax would be avoided. In 1899 the Estates with good reason voted against the proposition to introduce the tax; it was not necessary. It would possibly be useful, even if it is not necessary, for the sake of the Communal taxation to have a similar tax on capital and income, to be paid also to the State. It might replace the present personal tax, the "mantals-penningar." If such a tax should be introduced it might be specially applied to a thorough reform of the custom duties, though here arises a difficulty

because the custom duties—the most important part of the system of taxes—do not depend on the vote of the Diet.

The stamp duties in the budget for 1901–4 are calculated at $1\frac{3}{4}$ million marks per annum, and as usual are partly a tax imposed occasionally on capital, and partly fees. The stamp duties in Finland are of a comparatively liberal character. Like those in Sweden they do not seriously hinder legal transactions, cheques, bills, or other obligations, which in many other countries are hampered with fees or taxes, to the great detriment of certain forms of credit and of many other economic transactions. As in Sweden, stamp-duties are only paid when people come into contact with public authorities. Inheritance in Finland is only taxed by a very moderate stamp duty.

We need not mention the insignificant duty on playing-cards, and we have already referred, when speaking of the manufacture of these articles, to the important excise on brännvin and beer, this last in the form of a tax on malt, as well as to the injustice and economical error of imposing a higher excise on the larger breweries. The excise {duties on brännvin for the budget 1901–4 are estimated at $6\frac{3}{4}$ million marks, but will probably amount to more, and also the duty on malt will be more than one million, though estimated somewhat below this amount. None of these duties are very hard. The forms of collecting, as, for instance, in the case of the beer tax on malt, might be improved upon. The reasons given for forbidding the import of brännvin and other ordinary alcohol do not seem convincing.

The customs duties have been an excellent source of revenue, and have been increasing rapidly. In 1826–34 they only yielded 660,000 roubles; in 1847–8 only

900,000 roubles; in 1858, after some reform in the previous year, but before the considerable reform of 1859, 1,300,000 roubles; in 1863, 2 million roubles; which amounts must be multiplied by at least four to be converted into marks. The amount estimated in the present budget of $32\frac{1}{2}$ million marks is too low if we may judge from the 35 and 36 millions of 1898 and 1899, and nearly 40 millions of 1900.

How far the financial situation allows of a complete reform of the customs duties is seen as soon as we examine the composition of the total. Notwithstanding the decrease in the duty on sugar imported from Russia, which causes a loss to Finnish finance of some millions, sugar and preparations of sugar contributed in 1900 12 millions, or $28\frac{1}{2}$ per cent. of the total; coffee gives between $3\frac{1}{2}$ and $3\frac{1}{2}$ millions, or about 10 per cent.; tobacco, 3 millions, or about 9 per cent.; wines and spirits, notwithstanding the prohibition of the import of brännvin, about $2\frac{1}{2}$ million, or 7 per cent.; fruit, one-half to three-fourths of a million, or 2 per cent.; tea, one-third of a million, or 1 per cent. Together with the excise duties on brännvin and malt, these duties, which are, or at all events can be made, purely fiscal, produce about three-quarters of the total. If we remember the good result of the last budget, as well as the by no means excessive duty now demanded on articles so well able to pay duty as alcoholic liquors and tobacco, we find that it would be quite possible to abolish entirely all the other duties. In fact, they are all detrimental to the economic life of the country, and they are causing difficulties at the custom-house. Such a total reform would be possible without increasing the duty on such an article as sugar, which is a good financial resource, but which for other reasons had better be free or slightly taxed. There is nothing to hinder the aboli-

tion of duties which are a burden to industry, such as the 4 millions, or 11 per cent., paid on metals, as well as the 2½ millions, or 7 per cent., paid on machines and implements. There is nothing to hinder the abolition of the 1 per cent. brought in by a duty on meat and pork, or the duty on textiles (yarns and cloths amounting altogether to 5 millions, or 8 per cent., made up of 6 per cent. on piece goods and 2 per cent. on thread and yarn). Part of these duties help considerably to give the manufactures of the country a wrong direction, though it is true that duties on silk, velvet, and other high-priced textiles which are not at present manufactured in the country, as well as the duty on Paris articles, are not protective. They, too, however, are the cause of difficulties, delay, and cost in the custom-houses, and for purely practical reasons they ought to be entirely abolished. It is only by limiting the collection to a very few articles of financial importance that it becomes possible to avoid arbitrary treatment, and to simplify materially the custom-house administration. We will not here refer to such articles as meat and pork, fish and maize, which certainly ought not, as at present, to be taxed when imported from other countries than Russia. In Finland there is no serious hindrance to the introduction of an almost ideal system of taxation. By only taxing a few articles of considerable financial value, the foreign commerce, which is of such enormous importance to this northern country with its one-sided economic conditions, might be greatly developed. There is no financial necessity whatever to misdirect economic forces or to diminish the consumption of useful articles. The tariff of Finland is many times better, for instance, than that of Russia or even than that of France, Germany, and Sweden, so far as it

does not tax necessities of life, such as grain, flour, &c., and also exempts, or at least only imposes moderate duties, on raw material and other things used by manufacturing industries. But a fresh and considerable measure of reform is much needed, and ought to be carried through, notwithstanding all the difficulties created on the part of Russia. Low duties are often more productive financially than high ones, as was seen in 1893, when the tariff war was declared with Germany from the month of August, and when trade with Germany at once sank to a total of 43 millions from 50 in the previous year, and increased to 58 millions in the following year, when the war was over.

It is not lack of economic knowledge or class egotism on the part of the Estates which has hindered this important reform, and has permitted this department of finance to remain an antiquated part of public life, while nearly all the other departments were reformed in the enlightened liberal period. More than once since the first session of the Diet in 1863-4 the Estates have asked for decreased duties which would allow more commercial liberty, and also that more power might be conceded to themselves to deal with this, the most important of all taxes. The fact that in the "Form of Government" of 1772, it was left to the Swedish king alone to decide on the tariff, and that such decisions were included in the so-called economic or administrative legislation, was due to the idea that it was an especial privilege to trade with other countries. The old kings protected foreign merchants, and these paid for his protection. The customs duties were then only a small part of the taxes and revenues. The influence of the Estates was not entirely excluded; and they voted several times for special duties on articles of home consumption. As

regards Finland, the Emperor Alexander II., referring in his speech from the throne in 1863 to the work which was to be done by an organising committee, declared that the general principles of the tariff should be decided by himself in conjunction with the Estates. But this was one of his good intentions which were never carried out. Only on the tobacco duty has the Diet been allowed to vote an increase several times, in the same manner as it has voted an excise on brännvin and malt.

Instead of recognising this natural and proper right of the nation to vote its own most important tax, the special Russian interests which rule in St. Petersburg have now demanded concessions which would be greatly to the disadvantage of Finland, and which might even entirely destroy the present basis of the national economy. There has already been an insecurity and continual variation in the tariff without sufficient reason, which has done harm to the industries of the country, and which is not in accordance with good conservative principles. It is not, as already noted, that the Finlanders do not pay enough duty compared to Russia. Here, as is frequently the case elsewhere, moderate duties are much more productive of revenue than a high prohibitive tariff. But if the Russian tariff was introduced, imported articles would pay three times as much. This whole amount would not be paid, because less import would take place. But the present conditions of the national economy, and, in fact, of the whole civilisation of the country, would be changed. Instead of furthering civilisation, such a measure would, without any necessity whatever, injure the life of the people, and contribute to force it down to the same low level as that of a great part of Russia's inhabitants. We need not refer to the inevitable demoralisation

which would follow; the smuggling which it would be impossible to prevent on these cut-up coasts, where the whole population knows and uses the sea as their great highway, and which would be to the detriment of the finances of Russia itself, as well as of its artificially developed manufacturing industries. All the conditions for progress are here; the whole difficulty comes whence it ought not to come, from the rulers in St. Petersburg. It seems to be recognised that there are many practical difficulties in the way of an immediate revision of the Finnish tariff which would bring it up to the Russian level, but it is reported that the plan of increasing the tariff by such an enormous amount is only postponed, partly till 1904, and partly till 1906, when the privileges of Tammerfors come to an end. That is to say, instead of the progress demanded by justice and reason, the country is menaced with economic destruction.

Besides the tariff of customs duties, there is another public burden in regard to which a conflict has begun with St. Petersburg. This is the question of military service. The old Swedish organisation was excellent in principle; it was the same as the English—that the people were obliged to serve in case of necessity as militia, but that the whole standing army should be paid, both the army under the military tenure system and certain corps induced to serve by direct payment from the State. This freedom from obligatory military service is in reality one of the main reasons for the superior well-being and wealth of the people in England and the United States. It is a great advantage, which on the European continent is only held by the people of Switzerland and until now partly in the Scandinavian countries; where, however, Denmark, having had to fight with Germany, has instituted a short

obligatory service for all, and where Sweden has now decided to follow her example, at even greater expense.

In Finland the army under the military tenure system has, as we have mentioned, hardly been in existence since the union with Russia. The re-formation of Finnish regiments during the Crimean War was an exception. Real military service, on the same lines as in the Russian Empire, was however later desired and enforced by the Russian authorities, and was conceded. Except for important political reasons, it would be impossible to understand how the enlightened and extremely liberal men who led the Diet in Finland in 1878 tolerated the introduction of ordinary obligatory service in place of the old order, which was superior in its general principles. As was natural, some of the best men, as, for instance, the late Baron S. W. von Troil, were opposed to a system which implied that free men who were drawn for service could be forced to a barrack life which, instead of educating them, is too often destructive to young men. But even if we had known nothing at the time about the pressure brought to bear on the Finnish nation, recent events would have taught us why the new military law was then passed.

The military organisation then adopted was largely an imitation of Prussia. The period of active service was to be three years. Exemption was (and is) granted to clergymen, school-teachers, physicians, sailors, and pilots; also to certain others, such as only sons. Young men who had gained a higher educational standard could serve for shorter periods. Unlike Germany, however, it was only a small number of men who were taken for service with the colours. The young men were distributed by lot between this service and the reserve, so that till recently one-fifth served in the active army in time of peace, *i.e.* 5600

men against 19,000 in the reserve. This reserve required service from all, a total of ninety days' service during three years. The men who had served with the colours must remain in the reserve for two years at least. From the reserve all were transferred later to the "landtvärn," a territorial army which is only mobilised in case of hostile attack, and in which all had to remain until the age of forty, the time being now some years longer. The old Swedish military oath was changed, so that the soldiers promised "to defend the throne and the fatherland," which would mean Finland. The military organisation was decided by law, and voted by the Diet, and some of its provisions were expressly declared to be part of the constitution, after which declaration it cannot be changed except by the consent of all four Estates on the proposal of the Emperor. The conditions of military service and the economic administration of the army, which were included in this organisation, were dependent on the Diet. The real military order depended on the Emperor alone, and the commanding power was in the hands of the Russian Minister of War, who, for this purpose, had a bureau composed of Finnish officers. Nobody but Finlanders could serve in the army.

This military organisation has not only been attacked by the authorities in St. Petersburg, but the scheme for a complete unification of the Finnish military organisation with that of Russia has undoubtedly been part of an attack on the whole Finnish constitution. This military business was a point where the constitutional rights of Finland were felt to be a hindrance, and for this reason it was desired to do away with the constitution itself. To those who know Finland it was very curious to see the fear and ill-will in St. Petersburg against the Finnish militia, the

reserve which is on active service for ninety days. It was thought in St. Petersburg that such a national militia might serve the people against their rulers. All such ideas prove how little the rulers in St. Petersburg know the Finnish people, with their ideas of law and order and loyalty. They themselves have hardly any idea of such order and cannot understand how others can have it. The fact that the work of this reserve is stopped, and that it is being entirely done away with, is no great misfortune for the Finlanders. It might not even be a great evil if Finland should contribute money to the defence of the country, instead of providing soldiers. But nothing would be more entirely destructive to Finnish life than the service demanded by the Russian Minister of War, which included five years with the colours in Russian regiments and under Russian officers and non-commissioned officers. Those who know anything about Finland and Russia, the entirely different national temperament, the difference in habits of life, and so forth, know what this would mean. Many young Finlanders would not endure such a life. Their whole present manner of life and work would be upset. Finnish society would change its character. Already many young Finlanders have emigrated, partly to Swedish Norrland, chiefly to the United States and to Canada, in order that they may avoid the present hard three years' service. Until recently emigrants were few in number, it being more particularly those in Ostrobothnia who, by their connection with Sweden and Norway, had learned to emigrate; but this taste and practice is extending. The danger of a new and harder military service contributed at once greatly to increase the emigration. For this reason the emigration increased in 1899 to over 12,000 according to

official figures (but really probably to 16,000) from an average during the preceding years of about 3,000. In some districts nearly all young men left the country. If such a service, and especially a service of three years in Russia and in a Russian corps, should be introduced, the emigration of a majority of the young men, which is now a local exception, would soon become the rule. It would be on a still larger scale than was the enormous emigration from Sleswick when this country was transferred from Denmark to Prussia, since the Russian service would be harder than is the German service, and the habits of the Finlanders and Russians differ even more completely than those of the Danish peasants and Germans.

The Russian Council of State, in discussing the new Army Bill, took due notice of several important points in the counter-proposal made by the Finnish Estates in 1899, but the advice of the Council has been disregarded in the final decision in this matter. For the new Military Service Law, which was signed by the Emperor on July 12, and shortly afterwards was promulgated by the Finnish Senate, makes no other concession to the Finnish demands than lowering the period of service with the colours from five years, as originally proposed, to three years. The new law does not recognise the existence of a separate Finnish army; the existing Finnish regiments will be disbanded, with the exception of the battalion of the Finnish Guards and the regiment of Dragoons; and there will be practically no difference between Finnish and Russian regiments in garrison in Finland. Finnish conscripts will be enrolled in Russian regiments, and (contrary to the fundamental principles of Finnish law) will be ordered to serve anywhere within Russia or even abroad, and will be subject to the Russian

military penal code. Although the manifesto which accompanies and serves as a kind of introduction to the new law stipulates that "for the time being," *i.e.* till 1903, when the new law will come into force, only 500 men shall be called out annually for service with the colours (as against about 2000 under the existing law), the new law leaves it entirely to the Russian Minister of War to fix for the future the annual contingent, subject only to the Emperor's approval. The Finnish Estates are thus entirely debarred from all control over the contingent, a control so important for the economical condition of the country. The manner in which this new law has been enacted violates the right of the Finnish people to legislate on military questions, a right which was in the most emphatic manner asserted by the Finnish Estates in 1899, and fully recognised by the greatest European authorities, including Professor Westlake in England.

Various of its provisions also entail serious alterations in existing Finnish laws, such as the Penal Code, the sphere of the Law Courts, the rights of the Communes, &c., which cannot be legally altered except with the consent of the Finnish Estates.

An especially insidious and dangerous attack on the whole constitution, and even on the existence of the Finnish nation, is that Russians will receive commissions in "the regiments, the ranks of which will be preferably filled up by natives of Finland," and will thereby acquire the rights of Finnish citizens. Until now it has been one of the great guarantees for the national existence of the Finnish people that, according to the constitution, only Finlanders can be Finnish officials. Now, by a stroke of the pen, and against all law, a class of Russian military officers is created who, by their service in Finland, obtain some knowledge of

the country which thereafter may be used for work which no Finlander would be willing to undertake. But, above all, this ordinance, notwithstanding its momentary leniency, is a new outrage on that legal and constitutional order, without which no healthy national life and no great material development is possible. It creates and keeps alive an extreme anxiety not only for national rights and national life, but also for material welfare. What is not done to-day may be done to-morrow. Without regard to constitutional right, there is no guarantee for any work or any order.

CHAPTER XI

THE GOVERNMENT OF FINLAND AND ITS FUTURE

THE government of Finland is an instance of the fact that a constitution matters less than the manner in which it is used. The government has several anomalies, but it has worked relatively well. Its Senate has two sections, the Economic Department, which coincides with the Cabinet or Ministry of other countries; and the Judicial Department, which is mainly a Supreme Court. Only in a few affairs, such as when laws are prepared, do the two sections take counsel together. This peculiar arrangement is no great disadvantage to the country. The most anomalous feature in it is that the members of the Judicial Department of the Senate, that is, of the Supreme Court, hold their office as senators for only three years; while all other judges, as well as other officials in Finland, with a few well-defined exceptions, can only legally be dismissed by a decision of the court. The greatest practical defect in the organisation of the government is its connection with the Emperor, the medium between whom and his Finnish Cabinet is the Governor-General, and more particularly the Minister-Secretary of State in St. Petersburg—the latter of whom no longer has a committee for Finnish affairs at his side as formerly, and for the moment is not even as formerly, and as he ought to be according to law, a Finlander. Much depends of course on the personal character of the men. The four Estates who form the

Diet work in a manner which would hardly be thought possible for so heavy and complicated a machine. A procedure born of experience in Sweden has been followed and improved upon. One feature of it is the standing committees which prepare matters for the Estates, and which continue to sit while the separate Estates treat the matters sent up to them. Thus we have the Law Committee, the Committee for Economic and Industrial Questions, the Taxation Committee, the Bank Committee, the Committee of Finance or of Ways and Means, and the Committee for "Expedition" or tabulating the results of the Diet. Another important feature is the decision of matters which have to be decided when the Estates do not agree and there is not the usually necessary majority of three Estates to one, or, in some of the cases which require the unanimous decision of all four Estates, such as new taxes, or fresh expenditure. Such questions are decided by a two-thirds majority of the committee which it concerns, and which is increased to a larger body by each of the four Estates sending fifteen representatives. It is especially the Finance Committee which has to be "strengthened" in this way, and has to decide questions in which there is a difference of opinion between the Estates. This is a feature which might be imitated with advantage in certain other countries where the two houses too often find it difficult to agree. The franchise for two Estates, those of the citizens and the peasants, might be made more liberal. In itself personal representation, such as that of the heads of families who sit in the House of Nobles, is, of course, against strict constitutional principles, but, like the English House of Lords, Finland's House of Nobles is a very liberal, capable, and far from exclusive assembly. As in the case of

the bishops in the English House of Lords, practical objections might be raised against the part played by the clergy. But, on the whole, the Estates of Finland have worked well, better than most of the modern parliaments which are organised in a more rational manner. It is desirable to extend their influence, as, for instance, by more frequent sessions. According to the constitution, they must meet at least every five years; but even the three years' interval, which has been the recent period, was altogether too long, especially for current affairs such as votes of supply and appropriation of money. Nevertheless, after the session of 1900, a four years' interval was fixed by the Emperor. Van der Vlugt, the great jurist of Leyden, who calls the Finnish government "ideal," or "next to ideal," during its liberal era after 1863, perhaps speaks too strongly, but it is certainly a most remarkable example of a liberal, progressive, and reforming government, notwithstanding the lack of a democratic and liberal election law, and the absence of what might be considered even more necessary, a parliamentary government with ministers changing according to the majorities of the assemblies. Instead of "ideal," we will say that we see here a government proving how much can be accomplished by sound and just ideas notwithstanding great defects of organisation; and we will add that, during a long period, the leaders here were better men than has been the case in a good many democratic countries.

The Senate, particularly the Economic Department, works like the Cabinet in other countries. It has nine divisions answering to the departments of ministers in other countries: the Judicial division, the Civil and Finance divisions, a division dealing with Audit, and especially with taxation and the public domains, and

divisions known as Military, Church and Public Instruction, Agriculture, Commerce and Manufactures, and Means of Communication. Under the Senate and under these divisions are the usual subordinate offices of Prisons, Sanitary Board, Custom-House, Treasury, Audit, Commissariat of War, Schools, Agriculture, Surveying and Enclosure, Manufactures, Pilots, Post, Railways, and the peculiar Finnish Committee for the Preparation of New Laws. These last-mentioned offices are managed partly by a board with joint control and partly by one chief director. Their operations extend, according to circumstances, over the different parts of the country.

The local administration is still organised in a similar manner to Sweden, the provincial governors answering to the Swedish *landshöfdings*; in each *härad* or hundred there is a collector having also other executive authority, and with him an accountant to keep *inter alia* the tax lists, and under him small local executive officials with police and other duties. In Finland the parishes are of more importance compared to the *härad*s than is the case in the Scandinavian countries. The reason is supposed to be that there was not much political organisation before the country was conquered and converted to Christianity, when the parish system was introduced.

A peculiarity of the Finnish administration, even of the law courts, is the large part played by election in the appointments. Besides the three Superior Courts there are sixty-three local judicial districts or "*Domsagor*," not entirely identical with the *härad*s, of which there are a larger number. The local judge, the *Häradshöfding* or *Domare*, holds courts regularly twice a year in each of the three or four districts ("*tingslag*") into which each *Domsaga* is divided.

This local judge is proposed by the Superior Court and then nominated by the Finnish Senate or by the Emperor, if the Governor-General thinks reference to him necessary. The judge has at his side from seven to twelve coadjutors (Nämdemän), nominated by the court from among three candidates chosen for each place by the general assembly of the parish or commune. These coadjutors form a kind of jury, whose opinion decides if they are unanimous; if not, the judge has the decision. In the case of serious crimes, however, the Superior Court always examines the question. In the towns a Borgmästare (or two in larger towns) is nominated from candidates selected by the citizens. Where there are two, one of them has the civil administration, the other is judge; but he again has at his side two elected councillors. This organisation is not perfect: and it is suggested, among other matters, that the judicial element in the local courts of the härad ought to be strengthened. But it will readily be understood how such an organisation helps to guarantee rights, justice, and liberty in relation to the representatives of the government, both central and local. Besides, we must not forget the above-mentioned legal rule that no ordinary Finnish official can be deposed for other reasons than specific misdoings proved in court.

The Diets have lately wished to create and extend communal life and representation, at first in the läns or provinces, more recently in the härad.

The Lutheran clergy have one archbishop in Åbo and three other bishops in Borgå, Nyslott, and Uleåborg, chosen by the Emperor from three candidates elected by secret votes by the pastors of the diocese. The bishop is aided by a chapter formed by the dean and two other members chosen for three years' service

by the clergy of the diocese. The rural deans are also elected by their fellow-clergymen. There are 900 pastors for more than 500 congregations belonging to 366 parishes, each parish having usually two pastors, one rector and a chaplain. The pastors are mostly elected by the congregation from three candidates sent to preach on trial by the chapter, and if they are not satisfactory one more can be demanded. A smaller number of pastors, in theory nominated by the Emperor, are also really elected according to the choice of the congregation. They are mainly paid in kind. Every ten years a Synod of the Lutheran Church meets, consisting of the bishops, thirty pastors elected by their fellow-clergymen in the dioceses, a member of the Senate, some jurists and professors of the University, and forty-five lay representatives of the congregations. All church laws must first pass this Synod and can only be treated by the Diet and the government afterwards. The affairs of the separate congregations are decided by their assemblies, the "kyrkostämman."

The small Greek Orthodox Church, consisting of a few congregations in the south-east who were allowed to continue when Gustavus Adolphus gained this part of the country, numbers about 40,000 persons. A few other congregations exist at some other places where there are a small number of orthodox people. The Orthodox Church in Finland has its own Archbishop, and in Church matters is under the Holy Synod in Russia. In the towns, where there are a few Greek Catholics, the Churches are, against the general rule in Finland, maintained by the public treasury. For this reason the contribution paid to the Orthodox Church by the government is very considerable in proportion to its small number of adherents. The most serious

complaint in relation to this Church is the prohibition to leave it, and the compulsion put upon parents to educate their children in the same confession. Such compulsion is contrary to the laws of Finland, but it does not seem that the Finlanders desire to raise the question. Members of the Greek Orthodox Church are often attracted by the more intellectual, instructive, and educating character of the neighbouring Lutheran churches, while their own Church is great in ceremonial and legends. In some very few cases young Lutherans are said to have left their own Church for the Greek Orthodox confession because they could not read, an art which is demanded by the Lutheran Church as a condition of confirmation and thereby also of marriage.

The present communal organisation is modern; in the country it dates from 1865, in the towns from 1873; but old Swedish experience in self-government, and the self-governing organisation of the Church, has brought about a wide-reaching development of communal life. Towns of over 2000 inhabitants elect municipal councillors by votes, which are to a certain degree of a value proportionate to the taxes paid by the voters. Towns of 2000 inhabitants or less may elect representatives if they so desire, and they generally do so. The large country Communes have, on the other hand, nearly always preferred to decide matters in general assembly. The executive authority and the ordinary administration is in the hands of a committee chosen by this general assembly. Also the towns have a committee of finance and several other special executive committees. Such a communal organisation necessarily gives considerable strength to the national life.

It is unnecessary to speak here of the higher-class

schools and other institutions for instruction which are now established in sufficient numbers, both for those who speak Finnish and for those who speak Swedish. They are founded by the State and by the Communes, as well as by private persons who now receive considerable subventions from the government. The teachers are comparatively well paid. A great part of these schools are common to boys and girls. In the private elementary schools the girls form one-third of the scholars. There is a happy variety of studies, and the scholars have to a certain degree a free choice of subjects. English is among the languages comparatively little studied, and notwithstanding their intellectual connection with Western Europe the Finlanders have until now been little in touch with English thought, literature, and language. To some extent, this is in consequence of the necessity for learning both Swedish and Finnish, and, in some cases, the foreign and very difficult language of Russia. English is undoubtedly at present as important as German and French.

Of the greatest importance, however, is the recent organisation of the public elementary schools, and especially their relations to the clergy. For several reasons compulsory education has not been thought desirable. The extent of the country makes it difficult to enforce, and there was, too, a certain fear of putting education, and with it the national life, into the hands of public authorities. Neither was it really necessary to introduce other constraint than the demand of the Lutheran Church, that all young people must be able to read if they want to be confirmed and married. Except among sick, feeble, and abnormal children, there are hardly any who do not know how to read. Elementary instruction is mostly given at home, but there are also elementary schools of different kinds

everywhere. The pastors take care as formerly that such are established and maintained, and in their capacity as directors of religious instruction they can test the children's ability to read. The lower-grade schools are, however, largely only migratory, the teachers only remaining a short time in each place; but there are also permanent schools of this class, in which case the beadles or vergers assist. In these schools religion and reading are always taught, and generally arithmetic, writing, and some other subjects. The masters and mistresses are partly educated in small seminaries and partly manage without special education. The State contribution to the schools is not very considerable; regular subventions are only given to the Communes in the Greek Orthodox districts of the south, where the poverty of the peasants is given as a reason for such assistance. Outside these parishes, however, the State pays for the religious instruction of all Greek Orthodox children. The elementary schools in Finland, like many other departments, have, however, made great progress since the time of Alexander II. The law of 1866 ordered that seminaries should be established for the education of teachers, and formulated a programme for the so-called higher elementary schools in town and country. Uno Cygnæus was the man who did the best part of this work. The State was obliged to help as soon as the Communes had done their part, and the towns were at once compelled to establish higher schools for the children. In the country this was left to the decision of the Communes, until in 1897 the Estates passed the law which now obliges all Communes throughout the country to establish within a period of ten years enough of these higher schools to give instruction to all children between nine and sixteen years of age. In other matters

the regulations of 1866 have been maintained. As soon as the Communes or private persons procure a house and furniture and educational appliances, and give the teachers firewood, land, and grazing for a cow, then the State gives a comparatively considerable contribution to their salary—800 marks for men, 600 for women. The salary can be increased to 1200 and 900 marks. The rectors and chaplains may control the religious instruction of these schools, but the management is in the hands partly of inspectors, and partly of a separate higher administration, in addition to the elected local directors. The first seminary for the education of teachers in these schools was established in the interior, at Jyväskylä, for Finnish-speaking young men and women; later, a number of other seminaries have been added, especially in the towns on the western coast, separate Finnish and Swedish schools for men and women, as well as mixed schools. In the higher elementary schools, reading, arithmetic, and writing are taught; also history, geography, and natural science, as well as designing and manual arts. At present more than a seventh of the total number of children are instructed in these schools. Private persons have established some so-called "People's High Schools" for young, grown-up people of both sexes, according to Danish models. The Russian Governor-General does not favour giving public subventions to these schools.

In the schools, as in other spheres, women hold very important positions in Finland. Their right to dispose of money earned, also of property at marriage or on coming of age, is not peculiar to Finland; but there is hardly any country where women make similar efforts to obtain education and work. Women of the higher classes do as much as those of the lower classes.

The first lady obtained access to the University in 1870; in latter years more than one-fifth of the young students are women. It is not yet usual for women to hold high official positions, although they may be elected members of school-boards and committees of public assistance, but they work in every department, and in many positions for which they are better adapted than men. They are found in greater numbers than men in the banks and public treasuries as cashiers and accountants, and in the post and telegraph offices. In the country the postal officials are mostly women, and half of the teachers in the public elementary schools are women. A great number are now found in the liberal professions, the majority being among the doctors.

Besides the great number of associations of different kinds for agriculture and other branches of economic life, and for scientific and artistic purposes, we may here mention further the associations established especially for spreading knowledge and education among the people. The oldest of these is the Society for Public Education, established in 1873, which is especially engaged in spreading popular Finnish and Swedish literature. There are further two societies called "Friends of the People Schools," one Finnish and one Swedish, which establish and assist schools where the local Finnish or Swedish population is unable to do so itself. Not long ago the "Hemskola" (Home School) was established, an organisation to assist education in the home, which is already of great importance in Finland, and in the present situation is particularly interesting. Excellent pamphlets and literary and educational material of various kinds are now at the disposal of the smallest and most distant homes of the large country districts. The

students contribute during the vacations to further the great work of rural instruction and education. At the University of Helsingfors an organisation has also been established resembling the English University Extension system, a movement which is now spreading to many other countries. A great number of other associations play an important part in the public education and the general development of the people; as, for instance, the numerous so-called young people's associations, and many of the already mentioned associations of workmen. Also the temperance associations and their great work must be mentioned. In Finland, as in all Northern countries, there is still a good deal of drunkenness, but the preference of a large portion of the nation for temperance, and even for total abstinence, which is the reason why it is by no means common to find alcohol in the farmhouses, is largely a consequence of the organised work of such societies. The efforts on behalf of public education by means of associations and societies is not favoured or liked by the present Russian Governor-General, especially at the present moment; but the right of forming associations and societies, notwithstanding the formal permission required and usually asked for, has been regarded as a part of the law. That this liberty of association should have been now made dependent on the arbitrary will of the Governor-General, by decree of the Emperor, is one of the causes of the present popular discontent; it is regarded as neither legal nor just nor wise.

The contest between the two languages, Finnish and Swedish, has ended in equal rights for both; but as late as 1850 the government was opposed to the printing in Finnish of other books than those dealing

with religion and farming. The determination of the Finns to have their language fully recognised was well founded and necessary. The preponderance and even exclusive use of the Swedish language in the schools and in public life long after 1809 could not be admitted, and the Finnish people undoubtedly had a right to full national development. Only by means of their own language could the people be fully educated, developed, and strengthened. It would, however, be equally a mistake to relegate the Swedish language to a subordinate position. Those who speak Swedish are a minority of between one-eighth and one-seventh of the whole population; but a minority has its rights, and furthermore it is unwise to break up the historical tradition so long as this minority continues to represent an essential part of the national literature and culture. It is also a valuable means of communication with general European civilisation that Swedish should continue to be one of the national languages of Finland. The efforts on behalf of the Finnish language have already obtained equal rights for both languages in the political and social world as well as in the schools; and accordingly all officials must understand and be able to use both Finnish and Swedish.

To make Russian the official language for the higher administration, as has now been ordered, is, on the other hand, not only against the present law, but is unnecessary, unjust, and a hurtful and detrimental burden on the people. In reality there is no Russian population in Finland. Of a total of 2,700,000 persons there are 8000 of whom Russian is the native tongue. To Russianise a people who are so advanced in civilisation and education as the Finns is of course an utter impossibility in our times; but that a part of the people, and especially of the

educated classes, should be obliged to use the Russian language without any necessity, and without thereby obtaining the least good, is intolerable, and so much the less tolerable because the country has already two languages (and languages so fundamentally different as Finnish and Swedish) which all educated persons must learn and use. To make Russian the official language, contrary to the laws of the country, is another reason for discontent; and instead of attracting a greater number of Russians, it will render their position in the country more difficult, and finally impossible.

The position of the press in Finland is one of the darkest features of its modern public life. Like all well educated nations in the North, where the winter nights are long, the Finlanders read much. In the autumn of 1899, before the late attack on the press had taken place, there were ten Swedish and thirteen Finnish daily papers, and a total of eighty-two Swedish, one hundred and forty Finnish, and four mixed periodicals. Now a number of dailies and political weeklies have been suppressed. In the liberal period under Alexander II. it was of course intended to introduce legal rights for the press. From 1865 to 1867 a press law was even in force, but as the Estates did not agree with the government about certain restrictions the provisional law went out of force. There was then a return to the former system of "preventive" censorship, so that a paper can be censored and forbidden before the printing. In the last few years, since the present Governor-General came to Finland, press restrictions have become intolerable. Notwithstanding the control exercised by the preventive censorship, numerous papers have been suppressed in a most arbitrary manner, and without

respect to the rights of property and work of those concerned in them. In fact, there is at present hardly any legal order maintained in the matter. It is of course impossible to keep communications of a political character from a nation so advanced as the Finlanders, and the efforts to do this only make the ideas and their expression sharper and more bitter.

The tendency of thought in Finland has one peculiarity, which probably has some relation to the mixed nationality of the nation. The mass of the people is greatly influenced by the Lutheran clergy, who still exercise much of the educational and moral influence which has always been characteristic of the Protestant religion. The upper classes in Finland, on the other hand, continue to follow even more than in most other countries (excepting the great leading nations) the liberal movement which is common to the whole civilised world. The Swedes have always done this to a greater degree than any other of the small nations, having become very cosmopolitan since their participation in the great religious fights of Europe; and their share was not least during the liberal period at the end of the eighteenth century before Finland's separation from Sweden. At present the Finnish upper classes are probably more cosmopolitan and intellectually liberal than the Swedes; for with their mixed nationality they more readily learn other languages and the ideas of other nations. The ideas of life vary in different classes of the Finnish people, the masses being strongly religious, the upper class comparatively liberal; but, like Englishmen, they are united in concerning themselves more with the practical work of life, and less with theories and sentiments which lack a goal.

It must not be forgotten that Finnish legal organisa-

tion and methods are still in use in ordinary civil matters. There is the same security, the same forms of justice and law, civil and criminal, as in other civilised countries. And the ordinary Finnish official holds to the law and legal methods as closely as his foreign *confrère*, the whole class being remarkable for its honesty, and bribery being almost unknown. The corruption prevailing in some other countries, backward in civilisation and in the maintenance of legality and public morals—a corruption which undermines law and makes good order next to impossible—is unknown in Finland. In proportion to the force of such ideas about individual and social morality, the lack of security in public law, and the doubt whether it is the law which is supreme or personal arbitrary will, is the more keenly felt. Already the danger which exists and the anxiety which is felt about it are burdens on the whole of social life, the material as well as the intellectual.

Our study has shown where the Finnish people stand in regard to material development. We have seen the great progress made, and further that which is designed ; but we have also seen enough to know that the country is still far from being a rich country. In a report of the committee for the drafting of Bills we find a calculation of the national capital about the year 1890. The total amount of private fortunes was then calculated at about 2200 million marks, or 2396 millions without deduction of 181 millions of debts due from one person to another. The items were 1464 millions of real estate, 36 millions in merchant ships (one ton reckoned as worth 500 marks for the steamers, 100 marks for the sailing ships), 164 millions as the value of domestic animals, 56 millions for the fixtures of the farmers, 311 millions

for household articles, 173 millions for stored goods, 65 millions for movable machines and implements, 57 millions of cash of all kinds, and finally 60 millions as debts due from the State or other public institutions to private parties; in all, private persons' movable capital, 922 millions. These values, showing an average of less than 1000 marks per head, are of course now much higher, but they were (and are) low compared to a good many other countries. In Great Britain and Ireland the value of all property was reckoned a few years prior to 1890 at 7000 francs per head; for Holland about the same; Belgium a little less; France about 6000; Germany under 4000; Denmark about 4000; Norway hardly 1500; Sweden, according to different calculations, about 2000; for the poorer countries of southern Europe rather more, even as much as 1800 francs for Italy, and still larger amounts, if we are to believe statistics, for Greece and for some of the countries of the Balkan Peninsula. In several respects it is of interest to compare Europe with the United States. The census of 1890 in the United States showed an average of 6000 francs per head, or about the same as in France. On the same level as Finland we find only the poorer of the old slave States, of which some sank below \$200, or 1000 francs per head. The total property of the north-western States, among whose inhabitants there are so many men from northern Europe, averaged from 5000 to 10,000 francs per head, the same amount as in the rich north-eastern States. California even rose to between 10,000 and 15,000 francs, and some of the new mining States to over 15,000. Australia was not much below 10,000; Canada up to 5000; and Argentina about 3000. As we have said, Finland is only in the early stage of wealth-production.

The advance of Finland, however, is satisfactory; and, among many other facts, what is known about the distribution of incomes in the cities proves her progress. Dr. Heikki Renvall tells us of the results of the income-tax, which continues to be levied in the towns; and especially results coming from the larger towns during the period 1875-99. We find here that the number of taxpayers progresses more rapidly than the total population. In Helsingfors, where the same classes were taxed from 1885-99, there is in these years an increase of 88 per cent. against an increase in the number of the people of $81\frac{1}{2}$ per cent.; in Åbo 101 against 22; in Tammerfors, 286 against $120\frac{1}{2}$; in Viborg, in spite of the fact that a larger part of the people now live outside the town, 58 against 25. It is particularly the smaller class of taxpayers which has increased very considerably, while, at the same time, a larger number of those who have been small taxpayers go into the more prosperous classes. This upward movement is the reason why the lowest class in 1890 was composed of two-thirds men and one-third women, and in 1899, on the contrary, one-third men and two-thirds women. The men obtain larger incomes, but the women rise to be taxpayers. This progress is in accordance with all the other facts we have noticed.

The information gained from the movement of the population is of the same character. Finland holds here, too, a favourable place in the ranks of the nations. There is a considerable excess, 1.5 per cent., of births over deaths, the same as in other first-class countries, and a comparatively large number of children are born to each marriage. People marry early; there are, however, numerous unmarried people. The poor living, still common in the country, sour bread, sour milk, and strongly-salted meat and fish, does not

result in a very great number of deaths. The average duration of life is not low, but a considerable number of persons die relatively early; the probable duration of life is therefore not high. The number of deaths among small children is not high compared with other countries, as for instance Southern Germany or the big Russian towns or provinces in interior Russia, where between one-third and one-fourth of all children in their first year die, not the least conspicuous cause of which is the rule for fasting of the Greek Orthodox Church. Finland shows in some parts a result less favourable than the general result, as for instance in the number of deaths among children in the neighbourhood of St. Petersburg, where many mothers leave their children to become wet-nurses in the large city; and also on the coast of Ostrobothnia, where we are less certain of the reason; it may be connected with the great prominence of salted fish in the food, or to emigration or other causes. The number of deaths is least among the wooded hills in both the western and eastern interior. The land is possibly more healthy here, where it is better drained by rapidly-running streams; also plenty of money is earned here in the woods. All these figures, marriages, births, and deaths, vary of course with the influence of good and bad years; showing for instance the fearful effects of a famine such as that in 1867, and the particularly good situation at the period of the great lumber export in the first part of the seventies, and showing again considerable progress during the last few years.

Another result shown by the above-mentioned work of Dr. Renvall is that it is particularly the industrial and commercial classes who are progressing, and whose numbers and incomes are increasing. The middle-class, with permanent incomes as officials or in similar

occupations, have not advanced in the same degree. Whether we look at the great progress of the lower classes, or at the larger number of men who now obtain considerable wealth, we see to what extent free industry is being developed. This is fortunate. Referring to the considerable means in the hands of the men who lead the economic development of Finland, it ought not to be left unnoticed that, except in England and the United States, there is hardly any country in which wealth is less employed for the gratification of personal pleasure and enjoyment. Nearly all the rich men of Finland continue to employ their means to advance the economic development of the country and for purely public purposes; just as in England and the United States.

It might be supposed that those who are at the head of the government would feel it an honour to do all that is possible for the progress of the country. With the popular sense of legal order and its genuinely conservative character, the political life of the country might also have improved. There might have been a fuller co-operation of the Estates with the government as regards the tariff for instance, or in more frequent sessions of the Diet, or by an extended election franchise, and in several other ways. We will not speak here of the press, a necessity and a great help to a nation in the stage of civilisation which the Finlanders have reached. However much is done here for economic progress, as well as for popular education, more might be done. It is noticeable that the Finlanders, like other new nations, have among them a number of men who are not only good but genuinely enthusiastic workers for the public welfare. These men ought to have the largest possible scope for their activity. We have referred to the poor North

as not yet even completely known, full of great natural difficulties, but still with considerable possibilities; and where access, for instance, to the ice-free northern ports would be of importance. In various ways the rulers might assist the honest, patient, tenacious, and sometimes really heroic efforts of the people. We need not lay stress on the absolute necessity for a national, independent and free development. Those rulers are in reality the strongest, and accomplish the most, who work with their people. And no people are more willing to co-operate heartily with their rulers than the Finns.

We all know the saying of Montesquieu that those countries are the richest which are the best governed, and not those which have the best natural conditions. It is, however, less true now than formerly. At present the central government in the most highly developed country has less influence than formerly, compared to local administration, and especially to the free efforts of individuals. In the United States we have seen parts of the country, especially some large cities, which have had the very worst administration, but where the whole situation and the general progress has thereby been influenced only in a small degree. Like hard natural conditions, a bad government may, in some respects, even be a stimulus. Still the influence of the government must always be enormous for good or for evil in a country like Finland.

As regards the present situation, we are compelled to ask, not only what good the government might do, but also what power of resistance the people have against its evil acts. In some respects the people had no need of modern arts to be able to resist. This is the case where it is a question of the conservation of nationality, and especially of language.

It has been well said that the Finns, who for more than seven hundred years have not been made Swedish, during centuries when progress was much slower, and when the liberal character of the Swedish government did not provoke any great resistance, have no need to fear being Russianised. Much intellectual national life will continue, notwithstanding all that may be done by the rulers. And to quell a national life, intellectual and economic, such as is now found in Finland, is an utter impossibility.

The bad effects which might follow such an attempt are best seen when we consider the possible acts of the rulers against the rights and welfare of the people. Let us suppose that the young Finlanders should really be compulsorily enrolled for military service in Russia. The Polish insurrection of 1863 began when the Russians tried to prevent a national movement, and ordered that the young men should be carried off at night for military service in Russia. It was then that these young men fled to the woods and really rebelled. Such an event would not take place in Finland; yet there is no doubt that a very great number, and indeed the best, of Finland's youth would emigrate to found a new fatherland rather than serve as soldiers in the Russian army. A Russian customs tariff would not make it absolutely impossible to live in Finland; it might improve certain industries in an artificial manner and at the expense of the people, but it would cause a fearful depression in the whole manner of living, and would be a hindrance to progress, public health and well-being, as well as an immense burden on the natural industries of the country, agriculture, exploitation of the forests and all connected therewith, and most of the manufactures which are really indigenous to the country, not to

speak of commerce and navigation. The United States could make great progress notwithstanding a bad tariff, because they form a continent which is largely self-sufficient, and where the wealth of one part assists the making of wealth in other parts. Finland would be separated for economic purposes from the more civilised countries, and bound to the poverty-stricken, artificially-isolated, and oppressed Russia. The worst influence is of course exercised in material, intellectual, and moral respects by the destruction of order, by illegal decrees, and unconstitutional acts and procedure. Justice is necessary for all social and individual life, for labour, capital, and for life itself. Here is the great question of the future of the country. The people may suffer but they will not submit, and it seems impossible that the proceedings taken by some of the rulers in St. Petersburg can be continued, and that the Russian bureaucracy can be allowed to destroy its weaker but more successful neighbour. We would rather suppose that the supreme rulers will at last listen to the demand of law, justice, and wisdom; since it is evident that nobody, least of all the Russian people, would gain profit or honour by breaking the law and oppressing the honest Finnish nation.



London: Edward Arnold.



INDEX

ADMINISTRATION—

- Central, 280
- Election prominent in, 281
- Forests, of, 99
- Local, 281
- Agricultural associations, 71
- Agriculture (*see also* Animals, Grains)—
 - Government assistance to, 70
 - Implements of, 61 ; import duty on, 62
 - Manure, artificial, 61
 - Rotation of crops, 61
 - Total products of, 70
- Alcohol—
 - Breweries, 129
 - Distilleries of, 128
 - Excise on, 129
- Alder, 80
- Ancient inhabitants of Finland, 2
- Animals, domestic—
 - Cows, 64
 - Horses, 62
 - Reindeer, 63
 - Sheep, 63
 - Swine, 65
 - Value of, 66
- Artisans—
 - Associations of, 145
 - Metal workers, 125
 - Number of, 143
- Aspen, 80
- Associations—
 - Agricultural, 71
 - Co-operative, 71-72
 - Various, 288
 - Workmen, of, 145

"BACKSTUGUSITTARE," 28

Banks—

- Banking law of 1866, 200, 221
- Bonds of, 221

Banks (*continued*)—

- Co-operative associations assisted by, 72
- Expansion and restriction, periods of, 208
 - In the sixties, 209
 - In the beginning of the seventies, 210
 - In the latter half of the seventies, 211
 - In the eighties, 212
- Bad times in early part of the nineties, 214
- Extension of business, 215
- Restriction, 217
- Foreningsbanken, 197, 202
- Grain warehouses of parishes, 223
- Kansallis Osake Pankki, 205
- Monetary system, connection with, 185
- Mortgage, for the towns—hypothekakassan, 221
- National Bank of Finland—
 - Administration of, principles of, 187
 - Establishment of, 187, 194
 - Final organisation of, 187, 194
 - Mistakes committed by, 200
 - Object of business of, 195
 - Present strength of, 218
 - Statement of, 206
- Nordiska Aktiebanken, 199, 203
- Notes, abolition of private issue of, 199
- Private—
 - Character of, 196
 - Issue of notes by, abolition of, 199
 - Statements of, 207
- Savings, 222
- Treasury and foreign loans, situation of, 219
- Various, 204

- Barley, 55
 Bath-houses, 23
 Beer, excise on, 129
 Berries, 81
 Birch, 79
 Bircharlar, 11
 Boställen, 32
 Buckwheat, 57
 Budget, peculiar character of, 247
 — for the period 1901-4, 248
 Buildings of wood and stone, 23
 Burning of forests—
 Agricultural purposes, for, 83
 Associations of peasants, by, 40
 Sowing after, 59
 Burning of grass lands, 60
 Butter, commerce in, 167
- CANALS**—
 Communication by means of, 228
 Government's interest in, 232
 Importance of, for lumber export, 229-230
Chemical industries—
 Calcium carbide, 125
 Matches, 127
 Wood, 126
Church—
 Greek Orthodox, 283
 Lutheran, 282
 Revenues of, 257
Classes—
 Artificial, abolition of, 33
 Islands, on the, 29
Climate, 54
 Advantages of, 13
Commerce—
 Belgium, with, 167
 Butter, in, 167
 Coast of Polar Sea and White Sea, on, 181
 Consumption, increasing, 156
 Denmark, with, 165
 England, with, 163
 Exports, composition of, 154
 France, with, 166
 Germany, with, 164
 Holland, with, 166
 Imports, explanation of surplus, 174
 Progress in, 153
 Russia, with, 160
 Tariff regulations with, 169
- Commerce (continued)**—
 Spain, with, 166
 Treaty with, 168
 Sweden and Norway, with, 165
 Tariffs, 167
 United States, with, 167
 Common forests, 92
Communes—
 Income-tax in rural districts and in towns, 264
 Organisation of, 284
 Rural, 259
 Town municipalities, 258
 Community of possession, 28, 39, 40
 Constitution, new military decree not in accordance with, 273
 Consumption, increase of, 156
 Cottiers (*see* "Backstugusittare" and Torpholders), 98
 Cows, 64
 Crown farms, 32
 — forests, 35, 98, 101
 — torpholders, 37
 Crusades in Finland, 6
 Customs duties. *See* Taxes
- DAIRY business, 66**
 Frozen cream, 67
 Russian suggestion, 69
 Debts of the State, 281
 Division of land, 48
 Donation estates, Russian, 41
 Development of, purchased by Finnish government, 45
 Ireland, comparison with, 47
 Peasants on, rights of, 41
 Property of, mediæval, 44
 Reselling of, to peasants, 46
- ECOLESTIASTICAL farms, 33**
Emigration—
 Extent of, 53
 Sea, migration to, 187
 Threatened, 276
 Enclosures, 34
 Of forest land, 91
 Excise. *See* Taxes
 Exports, composition of, 154
- FAMINES, 12**
Farms, area of, 23
 "Boställen," 32
 Crown, 32

- Farms (continued)—**
 Ecclesiastical, 33
 "Herregårdar," 30
 Joint-Stock Companies, 31
 Price of, 24
 Renting, 32
 Russian donation estates, 41
 Towns, bought by inhabitants of, 49
- Finances—**
 Centralisation of, 254
 Excellence of, 247, 256
 Public credit in relation to Russia, 256
 Railways, interest on capital placed in, 240
 Reform in the accounts, 256
 Possibility of reform, 267
 State assets, 255
 Finnish language, 289
 Finnish tribes, first settlement of, in Finland, 2
- Fir, 78**
- Fisheries—**
 Cultivation of fish, 180
 Legislation regarding, 179
 Marine, fishing, 178
 Polar and White Sea Coasts, 181
 Treatment of fish, 179
- Flax, 57**
- Forests—**
 Burning of, for agricultural purposes, 83
 Common, 35, 92
 Crown, 35, 98, 101
 Destruction of, 89
 By fire and wind, 95
 Enclosure of, 91
 Export duties on wood, 263
 Extent of, 74
 Of private forests, 82
 Kinds of trees, 77
 Location of, 75, 97
 Middlemen, prejudice against, 93
 North, peculiar situation in the, 97
 Peasant owners of, 20, 35
 School of Forestry, 100
 Settlements in, 35, 40, 101
 State interference with private owners of, 92
 Value of, 105
- Fortune, considerable, of leading men, 297**
- Freedom of agricultural development, 34**
- Funds—**
 Local, of general utility, 255
 Pension, 255
 Public—
 Agriculture, for, 72
 Separate, formation of, for various purposes, 253
 Stock Companies, of, 94
- GOVERNMENT—**
 Attacks on legal order by, 300
 Bad influence of, 299
 Character of, 278
 Public progress and, 297
 Resistance of the people and, 298
- Grain—**
 Barley, 55
 Buckwheat, 57
 Drying of, in "riar," 56
 Export of, 55
 Oats, 56
 Production of, 58
 Rye, 56, 57
 Wheat, 56
 Grasses, 58
 Gypsiæ, 5
- HEMP, 57**
 "Herregårdar," 30
- Horses, 62**
 Export of, 63
- IMPORTS, explanation of surplus, 174**
- Income of the people, 294**
 Advance of, 295
- Income-tax. See Taxes**
- "Inhysingar," 28**
- Insurance, 223**
 Accidents, 145, 225
 Fire, 224
 Life, 225
 Reinsurance, 224
- Ireland, comparison with, 47**
- Islands, classes on, 39**
- JOINT-STOCK COMPANIES—**
 Agriculture, for, 31
 Formation of, 150

